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A
MONTHLY MAGAZINE:

DEVOTED TO

Agriculture, Horticulture and Rural Economy.

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PUBLISHED BY

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THE MARYLAND FARMER:

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Vol. XVII.

BALTIMORE, APRIL, 1880.

No. 4.

For the Maryland Farmer:

OUR LONDON LETTER.

(From our Regular Correspondent.)

LONDON, ENGLAND, FEB. 4, 1880.

Although occasionally bright, the weather, generally speaking, has been dull and foggy during the past week, and inland navigation has once more been interrupted by severe frost. Threshing operations have been carried on with increased vigor, as the more liberal offerings of home-grown wheat testify, and some slight improvement in the condition of the grain marketed has been apparent. All out-door work has been stopped by the frost, but a large proportion of the arrears into which wheat sowing had fallen had fortunately been made up during the recent open weather. As the temperature had been so low, no apprehensions had been felt as to the too rapid development of the growing wheat. Indeed, in some districts, notably in Yorkshire, fears are expressed that from some cause the plant is deficient in vitality. This may be owing either to the severity of the winter or to the fact that seed of a suitable character was not sown. Many of the early-sown fields are, nevertheless, looking well, as far as it is possible to judge at present, and it is thought that Yorkshire advices do not furnish an index of the general state of the English crops. In Scotland farm work is tolerably forward in the earlier districts, but of course there has been no ploughing since the frost returned. The offerings of home-grown wheat at the country markets have been on a more liberal scale, and some improvement has been noticeable in the condition of many of the samples, but in spite of the general firmness of the trade, all except the choicest lots have been neglected, and difficult to sell. The imports of foreign wheat into London continue on a moderate scale. Last Monday's list of arrivals only slightly exceeded 30,000 qrs., of which quantity only 7,882 qrs. were from America, a smaller arrival than I have had occasion to note of late. Business has been quiet,

as despite the undercurrent of firmness which runs through the trade, the week's requirements have been of an ordinary consumptive character, but the scarcity of English wheat in good milling condition has not unfrequently turned the demand on those descriptions of foreign produce which could be advantageously used as a substitute. The statistical position of the trade offers few fresh features for remark, but a further increase of nearly 1,000,000 bushels may be noted in the visible supply in America, which now stands at 30,500,000 bushels, against 19,250,000 bushels at the corresponding time last year. According to moderate computations it is estimated that the requirements of Great Britain and France will reach twelve million quarters between this and August, exclusive of the quantity now on passage. Notwithstanding this, the trade continues discouraging to holders, as with liberal stocks to select from, and a bad sale for flour, dealers have shown no desire to do more than meet their present requirements. According to the official estimate, the surplus from the American wheat crop for 1879, is put down at 22,400,000 qrs., of which some 13,000,000 qrs. have already been exported. No doubt the position is statistically a sound one, for holders seeing that, large as available supplies are, they are not in excess of estimated wants, but it is difficult to convince buyers of this in the actual presence of good stocks, the quantity of California wheat afloat, and the increased export movement from India, and it will be still more so, should the season prove favorable to the growth and progress of the English crop. A development of the force now at work upon the trade may be looked for in May or June, but before then it seems scarcely likely that any marked rise can be looked for. Under any circumstances it will be necessary for the American "ring" to hold over their stocks for some time longer if their enterprise is to result in ultimate success. Meanwhile the gigantic attempt to force up the price of the staple food of the inhabitants of the temperate zone is regarded with little faith and less sympathy.

Farm Work for April.

This is, by nature, declared the opening month in this latitude for active operations on the farm. The campaign has, however, begun much earlier this, than any previous year for many heretofore. The winter has been truly astonishing in mildness, and hence the husbandman must be more than commonly active in meeting the pressing demand of the season. Owing to the peculiarity of the season, the corn crop will be planted much earlier; harvest may be expected three weeks sooner than usual, and hence, great exertion on the part of the farmer will be required to keep even with the season. Therefore, the manure should be hauled out and spread without a moment's delay. Plowing must progress rapidly if the open winter has not been taken advantage of to forward this important work. Clover seed is presumed to have been sown; if not, it with other grass seeds should be sown at once and harrowed in with a smoothing harrow, and if the land be dry or be light, it should be rolled. The grain crops will be benefitted by this work.

Start right, by having all your seeds ready, fertilizers on hand, implements in order, and working beasts in proper condition to perform steady and hard work, and the fields intended for culture neatly cleaned up, and all filth and briars and bushes burned, and the ashes scattered, and all roots, stones in the way of culture, stumps, &c., carefully removed and made into composts heaps or ash heaps, or utilized in blind ditching. A field thus prepared is ready for the plow, and in which good deep plowing can be expected.

OATS.

Oats should be up and growing, but it is not yet too late for a fair crop if sown at once, under the conditions as prescribed, in former numbers of the Maryland Farmer.

BARLEY.

Barley is but little grown south of Pennsylvania, and yet we cannot see the reason why it should be so. The soil in this region seems adapted to its growth. It delights in light dry loams, sandy or gravelly, or any rich open soil. Stiff clays or cold wet lands do not suit it. The land should be deeply plowed and well prepared. Grass seeds take remarkably well when sown with barley; they seem to love the protection from the sun which barley affords them, and seem to succeed better with barley than any other of the small grains. This crop is less liable to injury than other grains. It has no rust and rarely suffers from insects. The only trouble it encounters is wet weather at harvest, as the seeds sprout easily and are rendered

unfit for the brewers. It should be cut as soon as the grain is in the dough state and in a dry time. If the straw be green when cut, let it remain one day in the swarth before binding, then set up in small heaps without caps for a day or so, and remove to barn or stack well protected. Sow as early as possible after frost is out of the ground, and sow from 1 to 1½ bushels per acre—not less than two bushels if the land is in good tilth and fertility.

TOBACCO.

We are pleased to see that our efforts for years, to induce tobacco planters to cultivate less land and make the land rich, and take better care of the crop, has been practically illustrated in Harford county, where tobacco growing is a revived industry, and likely to become prominent, and will be profitable if conducted as the experiment of Mr. Dawson shows. The Harford Democrat says: "Messrs. Wm. G. Roberts and John Dawson lately sold the tobacco they grew on three acres for \$550. Mr. Dawson raised the crop on Mr. Roberts farm at Mill Green. A large number of our farmers will plant tobacco this season, as it is a profitable crop."

Let our planters, this year, curtail the number of acres in tobacco, and by judicious management of the land and crop, make one acre produce more money than three or four did or do under the old system.

All we have to say now is that rich, light soil is best suited for tobacco, and should be highly manured with well rotted stable manure, well intermixed with the soil by frequent cultivation with the harrow or cultivator, after the land has been well plowed, and before the plants are set out. On such land we would plant in drills, 4 feet by 24 inches, if we desired large, heavy tobacco, and at narrower distance for smaller and lighter tobacco. We should leave not more than 10 to 14 leaves on a plant, by topping low and pruning the bottom leaves. Stable manure is the best fertilizer to be used. Ashes, or a fertilizer composed of bone-dust, and potash would do if stable manure cannot be had. Keep the land well stirred and clean of weeds, by the frequent application of the plow, shovel plow, cultivator and hoe. It is a crop which requires constant attention, between working the ground, killing the worms and topping, suckering and pruning, but it pays well for such labor and care.

YOUNG STOCK.

See that the young stock have succulent grass in plenty or green food of some sort, but do not at present withdraw the grain they have been getting, unless very gradually lessen each meal as

the grass becomes more abundant and stronger. Young lambs should have access to bran and crushed oats or meal, and have with their mothers a run on rye or young grass. Calves at a day or so old, ought to be weaned from their mothers, and fed on new milk for a while or after the mode described by our correspondent, A. P. S., in our last number. By this plan, you save milk and butter, and the calf does as well as if it used all its mother's milk. Try it and you will be well repaid for both the trouble and small loss of time incident to this method of raising calves.

GRAIN AND GRASS FIELDS.

We cannot too often assert, that in our judgment every farmer will be well rewarded if he sows over every acre of his grain and grass, one bushel of gypsum and three or four bushels of refuse or agricultural salt, either well-mixed before sowing or sowed separately.

MILCH COWS.

Every cow giving milk should have all the green food that is to be had, or a generous supply of nutritious slops, until the pastures afford a full supply of grass. They should have access to salt, and pure water in plenty, not once or twice a day but whenever they may desire to drink. They should, at this season especially, be well carded daily. Those not fresh should have the opportunity of exercise, and be kept where they are liable to no annoyance.

BROOD MARES.

These valuable animals should be in a lot to themselves and carefully attended, with a supply of provender, some grain, and green food and pure water, having also a dry open shelter to retire to when they please, with bedding of leaves or soft straw.

COW PEAS FOR SEED AND GREEN MANURING.

Prepare for sowing Cow, Carolina or Ram's horn peas for seed or for fertilization. See our article on this subject elsewhere in this number.

ROOT CROPS.

Plant late potatoes this month or early in May, and now manure heavily all the ground you intend to sow in Beets, carrots or ruta baga. First, break the land deeply—it should be rich ground or have a good sod on it—subsoil as you plow, and then put on well rotted stable manure or barn yard manure and harrow it in well. After the grass and weeds come up, sow two bushels of salt per acre, one of plaster, and cross plow lightly, toward the first of next month, sow 200 pounds of a good phosphatic fertilizer, or nitrogenized bone-

meal per acre, and harrow well and often, to keep the land light and clean until the 10th of May, if the weather and condition of the ground permit, when sow by drill, the seeds of earrot and mangels or sugar beet, and later, sow ruta baga. You will make good crops, and such will be the benefit to your sheep, rich cows, hogs, beef cattle, and stock generally, that you will never in the future fail to increase yearly your quantity of root crops.

CORN.

Prepare for planting this king of cereals—CORN. The Middle States of the Union is the locality where Indian corn is most productive and profitable as a grain and fodder producing plant—though it adapts itself to any soil and every section of the United States. Even in the New England States it has been forced to produce 80, 100 and 120 bushels of shelled corn, and Dr. Sturtevant, of Massachusetts, has succeeded in growing on an acre 123 bushels, but in Kentucky these yields have been exceeded, and in Maryland several farmers have produced from 120 to 135 bushels of shelled corn per acre, and in fields of 20 to 50 acres, under rather adverse seasons. We have known a 40 acre field of corn, without manure of any kind, except that furnished by the roots of good clover, which had been pastured close, produce an average per acre of 75 bushels shelled. These are facts, and yet, in an ably conducted paper in the North, the question is still discussed, "How to raise 100 bushels per acre," as if it was the limit to which this great cereal can be brought to produce. We admit that this crop is so generally managed that 30 bushels seems to satisfy most of our people. But we say, that with a little more labor, judgment and generosity in furnishing plant food, the average can be brought up to 60 or 100 bushels. All that is wanted, is to have a fertile alluvial soil, rather dry, deeply plowed, and manured heavily with well rotted stable manure, and intermixed with the soil by frequent harrowing until the ground is thoroughly pulverized, then between the 20th of April and the 10th or 15th of May, plant good seed of some prolific sort, not so much prolific as to number of ears as prolific in large ears with small cobs, many rows and many grains in a row, of legal weight per bushel of corn, bearing near the ground, plenty of fodder and good sized stalks. Such requirements we think are met by the "Horse-tooth corn," although it is not quite as heavy or as early as we could desire it to be, but according to statements of reliable gentlemen given in our "Letter Box" in this number, it has been found to be not deficient in these respects in their section—southern Maryland—and

to yield over 6 bushels of shelled corn to the barrel of ears. This, it has done everywhere it has been tested.

Laying off the rows.—If the old plan be adopted and we like it, of planting in hills to admit of cultivation both ways, we should on land prepared as just suggested, check it with a small plow two or three inches deep, 4 by 3 feet and let 2 or 3 plants grow in each hill. The present system so popular is to drill it, and if it be drilled, then we would say, let the drills be 4 feet apart, and the corn stand 15 inches, or about that distance in the drills—that is, each single stalk from 12 to 18 inches apart, averaging 15 inches. On thin soils, even when well manured, the corn should be planted farther apart, say 4 feet each way, and only 2 stalks in a hill. By giving plenty of room for air and sunshine, we do not think any complaint would be made about *infertile* stalks, about which a learned Doctor seems to be much bothered.

Time of Planting.—We have just said the best time usually is between certain dates, but much depends upon the earliness or lateness of the season. Nature is perhaps the surest guide, if weather and condition of the ground permit. The Indian rule is a good one—plant when the leaves of the white oak are as large as the ears of a mouse. Our old farmers used to say, plant when the apple buds are about to burst into blossom.

After Culture.—Keep the cultivators and shovel plow going until the tassels begin to appear, and when high enough to thin, hoe well around the stalks. It should never have a weed or blade of grass in it until it has begun to shoot and tassel. Keep it clean and the soil stirred every 8 days, or oftener if it encounters a drought.

Correct analyses have shown that the grain, leaves and stalks of corn contain, in large quantities, silica, potash, phosphate of lime, magnesia and soda, therefore, we should use a goodly quantity, say 20 two-horse loads of stable manure, 6 to 10 bushels of fine ground bones, 10 bushels of wood ashes, 1 bushel of plaster and 3 bushels of salt, (refuse salt), all well composted and spread on each acre, and harrowed in just before the corn is planted. This, we think, a fit mixture to furnish plant food for 80 to 100 bushels of corn per acre on an improved soil. Corn is so voracious a feeder that too much humus and fertilizer can hardly ever be used. Rich soil and thorough culture, with plenty of air and sun admitted by proper distance between the rows, are the requisites to secure a large yield of tall growing maize in the Middle and Southern States.

Work in the Garden for April.

A good vegetable garden, we have often said, is a family luxury and a necessity, cheap and economical. Those who desire a good garden this year will do well to follow our suggestions, premising that a garden spot should have light, rich soil, or if clayey, ought to be thoroughly and deeply plowed, or spaded and pulverized, and enriched, with a Southern or South-eastern exposure.

Asparagus.—Fork in well rotted manure and rake off the beds, and dress with salt and ashes. If you have no beds, at once, secure this valuable food by preparing beds after the formulas to be found in the former numbers of the FARMER, or in the annual catalogues of nurserymen. Procure from reliable gardeners two year old roots, and plant them.

Cabbage for early use.—If you have no plants, or have not sown any seed, you better buy some plants that have good, bunchy roots, and set them out. Sow Early Winningstadt or Sugar-loaf cabbage seed for late summer or early fall use. If you have plants or buy some, set them out in rich ground well prepared, in rows two feet apart, and twelve inches apart in the rows. Do not plant in ground where cabbage has been grown within the last two years.

Cauliflower and Brocoli.—Sow seeds of these in rich and warm well prepared soil.

Peas.—Plant a few rows of these at intervals of from ten to fourteen days.

Beans, Dwarf.—Sow a few rows every week during this month for successive crops. Early Valentine and Black Wax are the best. The latter is a remarkably rich bean, gathered when the pods turn yellow. Boil tender and then cut them fine, and with cream, butter, pepper, and salt, return them, after they are drained before being cut up, to a stew pan, and let them stew a little. Nothing can be nicer in the bean line, for they are stringless and tender.

Lettuce.—Set out plants and sow a few more seed.

Radishes.—Every week sow a few radishes. You can sow them among carrots, beets, peas, etc.

Celery.—Prepare a rich bed and sow celery seed not too thick. Boston Market and Red celery are the best. As it grows, transplant to other beds, two inches apart, in drills six inches, it will then have bunchy roots and a strong stalk, to enable it to grow right off, when planted out in July for winter use. The smaller plants can be retained in the beds for August planting, which is best for late winter use.

Tomatoes.—Transplant some plants from hotbed to cold frame, and sow more seed in open border for late planting. The Trophy and the Yellow Improved Trophy are the best. The first for cooking and canning, the latter for eating raw.

Beets, Parsnips, Carrots, and Salsify.—For main crops, sow the seeds of these in drills 16 inches apart on rich, deeply worked, and well ashed land. As they grow, thin to proper distance apart, beets 4 to 6 inches, carrots 4 inches, parsnips 6 inches, and salsify from 3 to 4 inches apart. Beets, if left until they are a little larger than pipe stems or buttons, can be used as thinned, by boiling their young tops and roots together, and thus furnish a delightful dish. Nothing is better and more relishable than tender young beets in early summer; early blood turnip and Egyptian are best for summer, long blood beets for fall and winter use, if planted a month or two later. Indeed they will be all the better for winter if planted in July.

Spinach.—By all means keep up a supply of this wholesome and tender vegetable by sowing a bed of it now. Thin to six inches apart in the drills, which should be 16 inches apart. Work it well and have the soil very rich.

Gooseberries, Currants, and Raspberries.—Trim these, if not done before, dig in the manure about the roots, and mulch them with coarse manure or leaves. Trim them so as to leave only three or four main stems to each hill, and so as to admit plenty of air and light among the branches.

Strawberries.—Clean off the beds, stir the ground well with a fork-spade, get rid of all grass and weeds, rake in a dressing of woods-mold and rotted manure well mixed, and then mulch with long straw, tobacco or cornstalks, or wait and mulch with green grass when you mow the lawn. We would prefer to mulch now with some of the materials just mentioned.

Herbs.—All sorts can now be safely transplanted. Sow seeds in small, rich beds, in drills six inches apart, and next July they can be transplanted. Thyme, sage, etc., thus treated, will furnish heavy crops next September, or before frost. In this way any quantity of sage can be had for sausage seasoning, without fail, and with not half the trouble our forefathers had in raising sage in bushes as a perennial to be plucked like tea, leaf by leaf, at great labor, and most frequently finding themselves with no sage at hog-killing time, when it is an indispensable condiment for that well known luxury—sausage, liver puddings, etc.

Potatoes.—Plant Early Rose in well prepared ground, which was highly manured during winter,

or the past fall, and incorporated with the soil. Light, loamy soil is the best, the rows should be two feet apart, and sets twelve to eighteen inches apart in the rows. Open the furrows three inches deep, drop cut potatoes, cut to two or three eyes each, dust well with slacked ashes and plaster, 2 parts former and 1 of the latter. This direction is for early potatoes grown in the garden.

Fruit Trees.—Prune closely and cut out all dead branches or limbs, scrape off the moss or dead bark, and wash the bodies of the trees by the help of a white-wash brush, with a mixture of one gallon of soft soap, one quart of salt, and one lb. of flour of sulphur. Then loosen the soil for some distance about the roots, sow a little salt, and supply manure, lime, or ashes, if needed. Newly planted trees, we think, should be mulched.

Onions.—The soil cannot be too rich to grow onions well, and to give a large yield. Lay off drills fourteen inches apart and one inch deep, sow the seed thinly. When the young plants are three inches high, thin them out to two inches apart, and afterwards remove each alternate one so as to let them stand four inches apart; if for pickles, let them stand only one inch apart in the rows, or even closer. This mode may be pursued with the setts, which should now be planted three inches apart. Keep the soil loose about the bulbs and the space between the rows well cultivated. At first workings draw the earth lightly toward the bulbs, but when they have attained a fair size, loosen the earth from them so they may expand and grow freely on the surface. Potato onions require a slight hilling like potatoes.

Rhubarb or Pie-plant.—May yet be planted. A dozen plants are enough to begin with. It requires a deep, rich soil. With this and some cultivation, each plant will throw up many large leaves, the stalks of each leaf being large, juicy, with a tart taste. These leaf stalks are used in pies or as a desert, or furnish a rich, tart jelly. They come at that early season when there is no fruit, green or ripe, to furnish material for a desert. By cutting judiciously, never too many leaves removed at a time, a supply can for a long time be kept up. Never pull off the leaves, cut with a sharp knife each leaf close to the main stem. Never cut it until the second season after it has been planted, or third year from the seed.

In the fall, cover around the crown of each plant with a heavy coat of coarse horse manure. We give a recipe vouched for as good by a writer in *Farmers' Review* who discusses the Rhubarb plant: Peel the stalks and cut them in pieces one inch long; spread a plate with crust, and then fill the plate full with rhubarb, and use on it a tea-cup

nearly full of coffee sugar to each pie; use no seasoning, as the fresh, crisp pie-plant has flavor enough of itself; use no water, as the stalks have plenty of juice of themselves. The pie should not remain in the oven long enough to reduce the pie-plant to a pulpy consistency—only long enough to cook it through, and this will have been done by the time crust is done. Made in this way, eaten cold or hot, a pie-plant is not to be made light of.

For the Maryland Farmer:

Ventilation and Refrigeration.

Messrs Editors:—Believing that it will be interesting to you and your widely scattered and numerous readers to hear from me again on the subjects embraced in the above heading, I have decided to communicate some pertinent facts. Since the invention and general introduction of sub-earth ventilation, a number of devices have been invented and patented in the U. S. and other countries, in which ice and water are mainly used as the cooling agents, with an effort to substitute them for S. E. V. for dairy purposes, also for tempering apiaries, fruit houses, etc., etc. But the public mind is more enlightened now on these and kindred subjects than it was ten years ago, which is alike fortunate for both our producing and commercial interests.

The fact has become patent, and is now generally understood, that ventilation and refrigeration are not necessarily concomitant and co-existent, *i. e.*, that the latter may be secured by a variety of processes, and by some, to a certain extent, at a moderate cost, if no ventilation or change of air is required.

N. B. Ventilation, that is, good ventilation, means a constant and an entire change of the atmosphere. The result attained in the use of the ordinary ice-box is simply cooling, and *rotating the same air* in the box, or refrigerated apartment. This is not ventilation.

If the air is changed, the consumption of that usually expensive and troublesome substance, but now inobtainable, except it be artificially manufactured or is imported from the polar regions, is certainly too expensive for dairy purposes.

The cardinal features of the system of S. E. V.—Sub-Earth Ventilation—are an automatic tempering of air and perpetually changing it, in the building or apartment to be ventilated.

Experience has established the interesting and valuable facts, *viz.*: that ordinarily the temperature of the earth, at a depth of from eight to twelve feet below the surface, is about 50° Fah., and it varies but a few degrees in thermal extremes.

Numerous examples of S. E. V. which have been in use from one to five years, are known to supply a large volume of constantly changing air, the temperature of which only varies 6°, when the external temperature has varied 126°, or from 100° above, down to 26° below zero. It is proper to state, however, in this connection, that to accomplish such really marvelous results, certain conditions must exist and must be maintained. They are these: The subterranean air supply duct must be of adequate length,* and it must be a proper depth below the surface of the ground to be secure from solar influence†. The depth of the ducts are varied according to the quality of the soil in which they are laid, the aspect of the site, and the amount of air to be transmitted by the duct; and lastly, but of paramount importance, the size and form of the duct must be commensurate with the volume of air to be transmitted. If the quantity of air required to be conveyed through a duct in a given time is large, the length, depth, and form of the air duct must all be adapted, in order to insure the results desired.

To definitely ascertain these last named requisites involved has cost numerous and expensive experiments, and several years' time, particularly as the field of experiment has embraced over 132° of latitude, or from Mississippi to northern Wisconsin, and a range of longitude of equal extent.

There is no patent on the S. E. V. in Ontario, and as a natural consequence, it has been more generally availed of there than in the States.

A Mr. Jones, of Ont., stated at the annual meeting of the North American Bee-keepers' Association, held in Chicago, in 1879, that his bees made for him in a single year 31,000 lbs. of honey, for which he was awarded the prize at the Toronto Fair. He also stated that he wintered his bees in a cellar, tempered and ventilated by S. E. V. He further stated, in the presence of the writer, that he could make more money by producing honey at three cents per pound than he could by variety farming on a good 400-acre farm.

Several other intelligent apiarians present on that occasion asserted that they had found no method of wintering bees equal to S. E. V. This experience was endorsed by Prof. Cook, of the Michigan State College, who is the author of standard bee literature. A number of my correspondents are sanguine in the opinion that it will be but a few years before bees will be generally wintered by the use of S. E. V.

Several of my clients are considering the econ-

*Those in use vary from 100 feet to 450 feet.

†The depth of those in use varies from 6 to 14 ft.

omy of using a cellar for butter-making in the warm season, and the same for bees in winter. I have, however, from my standpoint, being a better dairyman than apiarian, advised to supply a separate subterraneanly ventilated cellar for the bees, and to run a "*winter dairy*." The most profitable dairying known to me, is where the cows run dry in "dog days," and are warmly stabled and judiciously and liberally fed and milked during the cold season. This embraces the best of care, in a sub-earth ventilated, close and well insulated stable, with a great variety of food, frequently changed, and mainly cooked, and a full supply of pure water the temperature of which should never be lower than 60°. I emphatically assert that with my experience of over 50 years in the detail of dairy husbandry, the above paragraph contains more valuable facts pertaining to dairying than can be expressed in the same number of words of our language. All experience verifies it, and it is not limited in the northwest, the most noted dairy district on this continent. The fact is also established that with the same number of properly managed cows, kept on the same area, the cost of keeping the cows throughout the year on the winter dairy system, is less, the labor of caring for and milking is more pleasant and less expensive, the return of fertilizers to the land is greater, the cows are more comfortable, and the fresh made butter, being marketed when the price for butter is always highest, when considered in the aggregate, exhibit a large balance in favor of the system recommended.

So it may, I believe, be said with equal truth that the cows will yield fully 30 per cent. more annually, and that they will remain profitable in the dairy from two to three years longer under this system than they will under the time honored one of keeping cows in what should be their period of maximum profit, on scanty, parched pastures, over which they must roam and gnaw, often during the entire heat of the day, to subsist, and must often also travel to and from remote, so called, pastures, and to my certain knowledge, often be wantonly hurried by boy, horse, and dog. All these barbarities are abolished by the adoption and practice of the innovation recommended, and by it at the period of gestation, when the dear, passive cow is least able to travel, she is permitted if properly managed, to remain in a plentiful pasture, with good and abundant shade and water, where she can spend the cool of the day feeding on herbage freshened by dew, and the heat of it in the cool, refreshing shade, there quietly to ruminate and well prepare for assimilation the food for the well developed embryo calf with which she

is burdened. In short, viewed alike from an economic and a humanitarian standpoint, winter dairying presents pre-eminent claims for its adoption, and thereby to supplant one of the greatest barbarities in modern husbandry. S. E. V. does not furnish low refrigeration, but it does warm air when it is below 50° and cools it when its natural temperature is above 50°. By this system air may be furnished for any desired purpose at about the temperature named, hence, if a temperature of 70° is required in the cold extreme, it only requires to be heated by artificial means, about 20°. The obvious economy of such a means of air supply and air tempering for human habitations, and for the quarters of domesticated animals, need no comment to elicit the approval and admiration of the intelligent, the class to which this paper is respectfully addressed. I should add, however, that air transmitted to a building by a subterranean duct, is entirely freed from dust and all floating matter, and at times when the condition of air is such as is proverbially called "muggy," it has been found to be wanting in an essential component of natural air, called oxone. It has been repeatedly proved that by passing air through an earth duct so fully supplies it with ozone that the premature souring of milk, common when there is a deficiency of it in the atmosphere, is entirely averted, and a saving of 30 to 50 per cent. of the cream, which is mechanically prevented from rising by the dense coagulated milk, is secured.

A veteran dairyman of Ill. estimates the saving to butter-makers of this country that would be made annually if all used S. E. V. to be not less than six millions of dollars.

An experienced dairyman of Vt. estimates it at \$9,000,000, which I am confident can be proved, by carefully conducted experiment, to be still short of the immense loss from the cause intimated.

Tests of the atmosphere in which cholera prevails, by the use of an instrument called the ozonometer, have frequently shown an entire absence of ozone in the air, and several instances are recorded by Government officials where the occurrence of a thunder shower suddenly charged the air with ozone, and the epidemic as suddenly disappeared.

This is a matter of conceded Hygienic record. The contact of the air with uncontaminated earth, in its transmission through an earth duct, proves to have the same effect as violent electrical discharges.

It was my purpose in this connection to have described two very efficient systems of refrigeration, and methods of purifying air, that have recently been given to the world, but the already too great length of this paper forbids it. I will, however, endeavor to describe them in time for the next issue of this good old standard Journal, which, unlike the writer, I see, is none the worse for having grown old.

Balto., Md.

J. WILKINSON,

What Other States do to Help the Farmer.

As promised in the MARYLAND FARMER for March, we continue to extract from letters received by us from gentlemen in different States showing what other States are doing in aid of the agricultural interest. Example has great weight in most matters and we trust will have a favorable influence upon the people of Maryland.

We have already shown what New York, Michigan, South Carolina, Tennessee, Massachusetts, and Pennsylvania have and are still doing, and the following statements will show how far Agriculture is fostered in other States of the Union.

NORTH CAROLINA.—“Our State gives annually \$1,500 00 in cash to support the annual exhibitions of the State Fairs. We have a board of Agriculture and Experimental Station, which is maintained solely by the tax on manufacturers of Fertilizers. Every manufacturer of Fertilizers, both in and out of the State, is required to pay a license tax of \$500 00 per annum on each brand they manufacture and sell in the State, which amount goes exclusively to the support of the Board of Agriculture, and which amounts to about \$25,000.00 per year.—T. M. HOLT.

NEW HAMPSHIRE.—Ex-Gov. Smythe says the State gives \$2,000 per annum to pay personal expenses of a Board of Agriculture and its Secretary. The agricultural societies are self-sustaining.

[It must be remembered that in this State manufactures and other interests are much more important than agriculture.—Eds. MD. FAR.]

MAINE.—The Hon. John May, of Winthrop, writes :

“We have a Board of Agriculture consisting of about twenty members, composed by each County Society electing one member, and four or five are elected by other societies such as Maine Dairying Association, Jersey Cattle Association, &c. The State pays nothing for the services of the members, only travelling expenses and for publishing the doings and reports in book form of the Board annually. The meetings for discussions are held in different localities throughout the State, exciting great interest and disseminating useful knowledge. We have one or more County Agricultural Societies in each County in the State, which annually hold exhibitions in the Autumn. The State pays each Society an amount equal to the amount raised by the Society itself, not exceeding four hundred dollars in all, to each County. In some counties there are three or four societies, in which case the State aid has to be distributed to each.

“It seems as though Maine was destined to outstrip all her sister States in corn and wheat raising. You have probably noticed in the papers that our farmers have succeeded in raising the past year one hundred bushels corn and sixty bushels wheat to the acre. This is no guess-work but actual

measure. So you see what our agricultural exertions produce. We are no longer willing to have it said that Maine cannot raise her own bread, and that she, like New Hampshire, is a better State to emigrate from than to live in.”

VIRGINIA.—“We have a Commissioner of Agriculture, in our State, a State Chemist partially paid. The whole appropriation by the State to agriculture is \$6 000, which covers Commissioner's and Chemist's salary. * * * Virginia is heavily in debt.—ROBT. BEVERLY.”

OHIO.— * * * “Our State Legislature appropriates every year \$3,000, for the aid of our State Board of Agriculture, which is a body duly authorized by the Statutes of the State, and has regular apartments in the capitol building at Columbus. It also pays \$50 a year to every County Agricultural Society that holds regular annual Exhibitions. We have a law now pending before our State Legislature for the appropriation of \$5,000 per annum to maintain an Experimental Station on the State Agricultural College Farm, which we think will undoubtedly soon become a law.”—M J. LAWRENCE. [This State has over 150 Agl. Societies.—Eds. MD. FAR.]

KENTUCKY.— * * * “We have a State Bureau of Agriculture ; the State furnishing salary to a Commissioner, and, I think, one clerk. The amount of salaries I do not know. There are no Experimental Stations ; in fact, no scientist connected with the Bureau. The Commissioner's duty is to correspond with private individuals ; also matters pertinent to his Bureau, and issue, as occasion may require, and so far as his time and force will permit, reports on various agricultural subjects.—C. M. CLAY, JR.

GEORGIA.—Dr. W. B. Jones says : “Our State recognizes the ‘State Agricultural Society’ and gives it \$2,000 (I think) to assist it in getting up premiums for the Fairs. * * * Our State has an Agricultural Bureau, of which T. S. Henderson, Esq., is Commissioner. A State Chemist is paid for analyzing fertilizers, etc. * * * The Bureau gets an annual appropriation of from \$15,000 to \$20,000 per year—I know not exactly. The office is in Atlanta. The office of Agricultural Commissioner and that of State Chemist is distinct.”

MISSOURI.—N. J. Colman, *Rural World*, writes : “The Legislature of the State does not make any appropriation to aid any State, County, or other Fair or Exhibition. It gives county courts power to contribute \$100 to aid County Agricultural Fairs. The St. Louis Fair Association, giving the largest annual Exhibitions in the United States, is a private corporation, got up by subscriptions in stock. The State contributes about \$2,500 a year in aid of the State Board of Agriculture and the State Horticultural Society, but gives no other aid whatever.”

ILLINOIS.—The Secretary of the State Board of Agriculture, gives the following information :—“I

will state, 1st, that the General Assembly in 1871, passed an Act, creating a Department of Agriculture, to be managed or conducted by the State Board of Agriculture. The same law provided a system of County Agricultural Boards. These County Boards to be organized in pursuance of law and the by-laws of the State Board of Agriculture. I send you, by this mail, a copy of the by-laws. 2nd. Appropriations to the State and County Boards have been regularly made for a number of years—\$3,000 yearly to the State Board to be paid in premiums at the annual State Fair, and \$100 to each County Union or District Agricultural Board, that held a Fair the previous year, paid in premiums not less than \$300, and a report of its transactions to the State Board of Agriculture as required by said State Board. The matter of appropriation is submitted biennially to the General Assembly.—S. D. FISHER, SEC."

In addition to these extracts from letters received by us, we append the following from the Baltimore *Evening News*, commenting favorably upon our article in March number, in reference to State aid to agriculture and what other States are doing in that regard. We are glad to see several leading political papers in our State have also endorsed our views.

The *News* says:

WHERE AID IS NEEDED.

The recommendation made by Governor Hamilton to the Legislature to withdraw the State's aid from all agricultural associations, has excited surprise and alarm among the inhabitants of the counties. The rural population looked upon the Governor as peculiarly their representative, he having proclaimed himself always as a farmer and having been distinguished as the model orator at county fairs. For him to raise his voice against State aid to the advancement of agriculture, fills the bucolic mind with dismay and shakes its confidence in human nature,

The intelligence of the counties, therefore, is on the move, and the Legislature will be urged to disregard this proposed change in our public policy, which cannot be classed as a substantial reform. The *Maryland Farmer*, the able organ of the country population, has come to the front in behalf of our agricultural institutions, and in recent numbers publishes letters from all parts of the country showing what other States have done and are doing to promote the vital interest of farming, as examples worthy of imitation by our State. Every commonwealth in the Union appears to have adopted a more liberal policy toward the tillers of the soil than our own, and hence it is not surprising that they cry aloud and cease not when the little that has been conceded them is threatened to be taken away.

Certainly there is no State where the farming interest needs greater encouragement and stimulation than in Maryland. The soil in some of the counties has been worked down, our seasons are exceedingly capricious, and there is less ambition among farmers to excel in their peculiar lines than in almost any other section of the country. We have felt all the blight of slavery without a gentle climate and a new and naturally fertile soil to aid in recuperating our energies.

A few leading spirits have organized and given vitality to agricultural societies, and these, encouraged by State aid, were exercising a wholesome influence throughout the State. To stop the small aid given to them and to withhold endowment from the few agricultural institutions which foster them, will be simply to destroy them and their usefulness. They cannot yet stand alone and have leaned upon the State for an amount of support necessary to enable them to discharge their functions. It would be a pity to let them fall now; it would not be wise economy, indeed would be a great piece of injustice to a class who, holding the visible real estate, have to bear the almost entire burden, outside of the city of Baltimore, of State taxation.

An industry so extensive, important and deserving should be fostered. It does not ask much for this purpose and the amount could not be more economically or judiciously invested. Other States find that it pays to make such appropriations—indeed far more liberal ones than we are asked for—and we shall find it to our advantage to imitate them. Parsimony is not always economy, and the little the State can save by cutting off this stipend will be lost many fold annually in the future.

Results of Practical Experiments with Chemical Manures, in connection with the higher priced Manipulated Fertilizers.

Cumberland Co., Va., Feb. 9th, 1880.

Editors Maryland Farmer:—Chemical manures as compared with the higher priced manipulated fertilizers in producing paying results to the farmer, have attracted so much attention and produced so much discussion pro and con, in the different agricultural journals, that last spring, I determined to test the relative values on tobacco; using on one side, Powell's Prepared Chemicals manufactured by the Brown Chemical Company, of Baltimore, as they were recommended by that firm, also the same preparation with the addition of 10 pounds of ammonia 100 pounds of bone to each formula, and a well known, and I think valuable manipulated fertilizer, which cost me \$50 a ton on twelve months time, and which for convenience I will designate "A. B." Both styles of the mixture made from the chemicals were drilled 400 lbs to the acre; the other fertilizer "A. B." I used in two applications, putting 200 pounds in the drill per acre, and afterwards, on the 28th of

August, putting 200 pounds more around the plants, equalling 400 pounds of "A. B." fertilizer, the same quantity used per acre as the Powell's Prepared Chemicals. The land on which the experiment was made was in good heart and lightly manured with farm manure. The tobacco was the last I planted, four rows of each to which the different fertilizers had been applied, ran along side of each other through the lot, and were planted on the 12th of June, topped to eight leaves, cut on the 18th of October, and housed in the same house on the 22nd of same month. I now give suits:

It is perhaps proper to say, first, the results surprised me, being such as I had not expected. The rows on which both mixtures of Powell's Prepared Chemicals were used, seemed to suffer more during the dry weather, immediately following the planting than those on which the fertilizer "A. B." was used, and although they improved rapidly after the rains, which commenced on the 27th of July. I thought those on which the "A. B." fertilizer was used would give the best yield, and I also thought the rows on which the chemical containing the additional ammonia and bone was used would be better than those on which Powell's regular chemicals were used; but I was mistaken in both; From some cause, unknown to me the tobacco made from chemicals with additional ammonia and bone yielded less leaf, and more than double in proportion of lugs than the tobacco made from Powell's regular chemicals, or the "A. B." fertilizer. On one-half of my crop I used chemicals, on the other half the high priced fertilizer, both made very fine tobacco, with the following yield:

	Yield per acre.	Cost per acre.
No 1. Plants on which Powell's Chemicals containing additions of bone and ammonia were used.	1175 lbs	3.60
No. 2. Plants on which Powell's Prepared Chemicals (as directed by manufacturers,) were used.	1309 lbs	3.00
No. 3. Plants on which "A. B." high priced fertilizer were used,	1150 lbs	10.00
No. 4. Plants on which no bought fertilizer were used	950 lbs	

The difference, gentlemen, is so much in favor of the Powell's Prepared Chemicals, no comment is needed, but I would suggest that the saving in the use of Chemicals as fertilizers is well worthy of every farmer's attention, and I would be obliged for the benefit of the farming community, that you would ask that the results or other experiments of this kind be made known through your agricultural journal.

Yours truly,

WM. A. PERKINS.

For the Maryland Farmer.

Crops in North Carolina, &c.

I take great pleasure in giving my views which are corroborated by at least a dozen of our best farmers, with whom I had an opportunity to consult last week during our county court; it is that the prospect was *never finer*: no fly, no cut worm, but rather the best stands, the ground better covered, and the finest growth I ever recollect to have seen upon our lands, whose average valuation for taxation is less than \$4.50 per acre. I know of no acre in wheat that does not now appear to be sure to yield at least double the average valuation of the lands of our county in wheat this season at present prices.

Last summer and fall was very dry, the land that was seeded was well pulverized. The season has been the mildest we ever witnessed—at no time has green vegetation refused to gladden the eye. The Plumb, Peach, Apricot and Nectarine, are in full bloom. For the last ten days it has rained every day, no storm, but steady light shower.

I sowed last fall, about 150 acres in orchard grass, and never saw a better stand, although it did not come up until December, in consequence of the drought; with land at two to five dollars per acre, that will yield one to three tons of orchard grass hay each year, what will pay better?

Grain will grow in this section and with less labor and expense, than cotton and tobacco. Farm labor is plenty at seven to ten dollars per month and board or rations, which costs about two dollars and a half, which consists of 15 lbs. of bacon, 1 bus. of corn meal and a gallon of molasses. Prompt payers have no difficulty in securing as much labor as they want, but those who settle with their employees by orders upon stores or fail to settle promptly and with cash, find Negro labor very unreliable and difficult to control.

In conclusion, I would again refer to wheat, and say, more wheat was sold in this market last fall, than any year since the war. Mining has started up in our section, and people have been trying to learn to economize for several years; they are building more fences, improving their houses and barns, and in fact there is no doubt about our prosperity.

D. W. C. BENBOW.

March 12th, 1880.

THE MARYLAND FARMER.—We have received this book for the present month. Every number of the Farmer continues to grow more interesting and beneficial to the agriculturist and others. It is embellished by the picture of two splendid Percheron horses. It is one of the best books of the kind received at this office. Published by E. Whitman, 141 West Pratt Street St., Baltimore, Md., at one dollar per annum in advance.—*Fredrick Examiner.*



PENNOCK ROAD MACHINE.

Road Machinery.

Various implements have been used for working the roads by horse-power, especially in the West, where machinery is so universally used. These may be divided into three general classes: the dump scrapers, such as the patent revolving and the old style scoop scrapers; second, the diagonal or side scrapers, represented at its simplest by a plank drawn at an angle to the road, and shod with an old saw blade; and third the endless apron graders, (such as the Wachepe machine made in Chicago,) which convey the earth horizontally to the middle of the road on a revolving belt or apron where it has been thrown by a large plow.

The implements of the first class are defective in that they deposit the earth in mound-shaped piles, which settle irregularly, and then leave the road uneven and full of holes. Better roads may be made, indeed, by the old method of using plow and shovels, as a more even distribution of the earth can be attained; but this is far too slow and laborious to meet the demands of the present. The cost of maintaining the roads as they should be, by hand labor would be enormous.

Varieties of the oblique scraper have been in use for many years, in certain localities, as levelers; two planks joined in the shape of the letter V, being one form. Of late years several improvements have been made upon this principle.

Machines of the third class, where the earth is carried on large belts, are only adapted to the extremely wide roads of the prairie States. They can never come into general use because of their high price, (from \$400 to \$500,) and the fact that from 8 to 16 horses are required to draw them. Another objection to this style of grades is that they only build up the road and cut out the ditches, and do not put it in smooth condition for travel, nor can they be used to level up an old rutty road.

The Pennock Road Machine seems to combine the desirable points for such an implement. Of which, we have given a good illustration above.

It is apparently simple in construction and operation, effective and economical in work. It is both a road grader, for building new roads, and a leveller for repairing old ones. With this machine we are assured that two men and four horses will do the work of from thirty to fifty men in a far better manner. This machine is an improved side scraper on wheels, and operated by levers. It has a heavy oak plank, nine feet long, suspended at an angle to the road, shod with a concave blade and point of steel. The scraper bar is under the control of the operator, who is carried on a platform at the rear of the machine.

Where deep ditches are required and considerable earth to fill up the middle of the road, a plow is used with the machine to break up the soil, which is conveyed and deposited to its proper place.

This machine is said to be the most perfect road leveller for rutty roads ever devised, plaining off the high places, and filling up the ruts and holes. Stones, if not of extraordinary size, are not a serious impediment to the working of this machine, as they are loosened from the road bed, and finally deposited in a line along the middle, where they may be collected.

Samuel Pennock, the inventor, was the patentee of the first practical grain drill, by which the system of drilling grain was established in America.

From an acquaintance of years with this gentleman, we feel justified in saying that the guarantee of his new Road Machine, which appears in our advertising columns, may be relied upon. The manufacturers, S. Pennock & Sons, of Kennett Square, offer to send out these machines to any responsible party, for a week's trial, free. Let our road officers and enterprising citizens test them.

The Wheat, Fruit and General Prospects of Virginia.

Charlottesville, Va., March 14th, 1880.

Editors Maryland Farmer:—It begins to look as though we were to have our winters in March, as has been predicted, for, as I write, the ground is covered with ten inches of snow, which began falling on the 12th, while peach trees were in bloom. The winter here has been very favorable for the growing of wheat. Owing to long continued dry weather after sowing, growing wheat presented but a sorry appearance in December. It now looks healthy and vigorous, and more promising than I remember since 1876. A good wheat crop at present prices, which may perhaps be realized by early harvesting and early marketing, will give new courage to Virginia farmers, and perhaps check the growing tendency towards dishonoring of public obligations, now so rife in the old Commonwealth.

We have just succeeded in organizing a County Agricultural Society, and have elected Prof. John R. Page of the University of Va., President. It is to be hoped that it will invite new interest in agricultural improvement, and help to place our county as foremost in the march of improvements as she is pre-eminent in fertility and natural resources.

The area devoted to grape culture is being much extended around Charlottesville. The fine vintage of 1879 and the general success of our Wine Company is encouraging an increased production, and it is destined to become a leading industry. If the good people could only be induced generally to substitute native wines—which can be produced in almost every neighborhood in the State—for native and imported whiskies, we would see a different condition of affairs very soon. The people would be physically, morally and financially improved, and there would be no reason to complain of the burden of State Debt, and every dependency would give place to hope.

The truth is, our climate is not suited to the consumption of so much alcoholic stimulants as is practiced, so far as my observation extends, all over our country. It is without doubt gradually undermining the constitutional vigor and virility of our race, and thoughtful people should seek a remedy and try to correct the evil.

A few years ago, this subject was ably discussed by Dr. Sharp, in the MARYLAND FARMER. He conclusively showed that the substitution of light wines for stronger beverages to be a movement in the interest of temperance, and consequently of

health and morality. It is idle to urge prohibitory laws to suppress the evils of intemperance. The history of our race in all ages and among all nations, shows that people will seek the cup that cheers. Where happily that cup be "The cup which cheers but not intoxicate," all is well, and far less of intemperance and its attendant throng of evils is manifest.

In France, Italy and Spain, indeed, all Southern Europe, outside of the Mohammedan Empire, where the Koran interdicts all intoxicating liquors, the use of light wines is the rule and of distilled liquors the exception, and thus is far less of inebriety than in Northern Europe, England and America. In China, the cups derived from their fragrant tea leaves sufficed, till Western civilization brought to them and forced upon them the opium traffic.

In view of all this, is there sufficient encouragement for the planting out of more vineyards, in Maryland, Virginia, and the Carolinas? If not, it may be found in the fact reported of the continued devastation of the phylloxera in the vineyards of France, and the diminished production and advance in prices. And again, in the fact that it is known that very large quantities of American high wines are now used to "extend" the exported wines of France and Germany, and that very little of known purity comes to this country.

A wise regard for the future ought to inspire at least, general experimental planting of grape vines. By so doing it will be found that there are some specially favored spots, where the most valuable vines for wine can be successfully grown in healthfulness and productiveness for a long term of years, and such may prove to be a mine of wealth to the fortunate owners. As "one swallow does not make a summer," neither will one or two successful crops prove the superior adaptability of a location for a certain grape. To illustrate: Here, on my farm, the Delaware, one of the most valuable grapes, succeeds well. The Norton, Va., another valuable grape, not quite so well; while in vineyards just as far from town the other way, the Delaware has failed utterly and the other is luxuriant.

It is safe to say that any accessible land which will produce without impairment of the vitality of the vine, even a medium crop of say 4,000 pounds per acre of good Catawba's, for a term of ten or twelve years, is worth \$100 per acre without improvements. I should estimate a higher value but name that sum. Are there not such locations on the slopes or in the valleys of those States, where

the structures of the soil, the drainage and elevation are favorable. It is believed that there are many such. Who will be the discoverers? The owners should be, certainly. Why, the famous "Pleasant Valley" in New York was a few years ago found to be exceedingly favorable for grapes, and adjoining stony hillsides that could have been bought for \$5 per acre, ran up to \$400 per acre, and vineyards in bearing, were sold at \$1,000 per acre. It is true that was under a speculative fever, but their productions have become famous, and I understand have continued profitable.

I remember seeing vines thrifty and well-laden in land so stony that not a particle of earth could be seen. It makes little difference how such land is if it has a porous open subsoil, and room for roots to expand. It would not of course, be advisable for any one to plant largely until he learns what he can do. It will not take long to interest capital to invest money in wine cellars and vineyards where the conditions will justify it. Now if owners who have reason to think they have the favorable conditions as to soil and exposure will just make a trial, it can be done without much outlay of money, and the yearly crop will be a welcome reward in the mean time. They can rest assured when they discover the home of the "Catawba," and the Delaware too, I may add, such lands will be wanted.

If desired, I may give some thoughts upon planting and training, suggested by our experience here at another time

It is sheer waste of time and money to plant out vines or fruit trees, and then neglect caring for them or to cultivate and prune, and then permit stock to range over and break down. This may seem to be superlative, yet, I have often seen it done. "Line upon line and precept upon precept," is just as good for some men as for children.

J. W. PORTER.

We appreciate the following' compliment from the *Baltimorean* of March 6th:

"THE MARYLAND FARMER for march comes heavily laden with all that is desirable to the class for which it caters. An excellent London letter occupies its first page, and for the fair sex there are nice dishes of chat and domestic recipes. Only \$1 per annum strikes us as remarkably low for a publication worth all of \$5. Ezra Whitman Esq., Baltimore is the publisher."

A bushel of clover seed, 60 pounds, will contain 20,976,000 seeds, which equally distributed over an acre will give about 3 seeds to the square inch of ground.

Corn, Meal, and Cob Meal.

We have for a long time advocated the plan of grinding up the corn on the ear as economical in feeding stock, and as being highly nutritive, while it utilized the cobs which were otherwise of little or no value. The value of corn cobs, properly ground, as they are in a mill like the "Young America Mill," we have never doubted and always advocated because experience had taught us their value during years of feeding stock, long before the mills were perfected to do such work as they do now. We therefore, with much pleasure, give our readers from the *American Cultivator* accounts of a series of experiments conducted by the Pomfret, Conn., Farmers' Club, and the Woodstock, Conn., Farmers' Club.

Nine thrifty shoats were brought and placed in three pens, the division being as nearly equal as possible. The experiment began April 1, and ended June 6, the result being as shown by the statement below:

	Lot 1	Lot 2	Lot 3.
Live wt., April 1, (lbs.)	454	460	456
Live wt., Jan. 6, (lbs.)	760	761	689
Gain, live wt., (lbs.)	307	294	221
Dressed weight,	615 5	593	527
Shrinkage,	13-80	15-165	11-635
Gain per bu., live wt.,	144-5	168	12
Per cent. shrinkage, lbs..	19-60	22-00	5-365

With lot No. 1 it took 4½ pounds of meal to secure a grain of one pound live weight, and 5½ pounds to make a pound of dressed pork. With lot No. 2 it took 4 185-294 pounds of cob meal to secure a gain of one pound live weight, and a trifle less than 6 pounds to make a pound of dressed pork. Reducing this quantity of cob meal to clear meal, it will be found that 3 7-8 pounds of clear meal make a pound live weight, while the equivalent of 5 pounds of clear meal made a pound of dressed pork. With lot No. 3 it took 53 79 pounds of clear corn to make a pound gain in live weight, and 6 10-197 pounds to make a pound of pork, dressed weight. Thus the feeders received for every bushel of corn fed in meal, to lot No. 1, 66 78-444 cents; for every bushel of corn fed as cob meal, 70 130-1361 cents; and for every bushel of corn fed without grinding, 59 64-298 cents.

These experiments show us that when we compare analyses of food with results in feeding, there is something we fail to discover. Neither chemistry nor theory would expect that corn ground with the cob would prove a feeding material of nearly equal value to that of clear meal; yet this experiment proves such to be the case, and further proves that cob meal is superior in feeding value to that of clear corn without grinding. Corn fed with the cob is greatly enhanced in value,

This is somewhat contrary to generally received opinions. We have long been satisfied that a certain amount of coarse material fed to cattle with a concentrated food was both judicious, economical, and profitable, but on account of the peculiar construction of the pig's stomach, we were not prepared for a result showing the desirability of feeding a coarse material in connection with corn meal.

Those fed on cob meal shrunk the most. Perhaps this was caused by distention of the stomach through the use of coarse food, enlarging permanently the stomach, and consequently containing the most food. Those fed on corn consumed the fewest pounds and shrunk the least in slaughtering.

For the Maryland Farmer:

Tillage.

BY WILLIAM H. YEOMANS.

The tillage of the soil has been practiced for ages with varied success. Tillage, in its most extensive sense, means something more than what is understood by the ordinary cultivation of crops.

If those crops that are usually cultivated are kept free from weeds, as a general thing they are said to be well cultivated, and yet the most important elements of tillage are entirely wanting. Soils are made up of a small portion of vegetable matter, and of the various chemical elements that exist in mineral substances. In other words, aside from the purely vegetable matter contained in the soil, what is termed soil is no differently composed than the solid strata that forms the crust of the earth.

And yet no sane farmer would think of planting crops upon a strata of solid rock, even if a considerable quantity of vegetable matter was present. Very many remarkable results are brought about by chemical action, but certain conditions must be complied with; acids and alkalies that are locked up must be brought into action, and then their force can be exerted. The mineral elements that enter into the composition of plants, find their way to them only in a state of solution, which is effected in one way or another by the operations of nature. To take a plain illustration, if alum was to be dissolved, or rendered soluble in one compact, solid body, the operation is very much extended from what it is if ground to a fine powder; to make an application of this principle, the mineral demands of the soil must be rendered soluble to be available, but if the soil is coarse it will be much slower, and then if extended to the solid rock, the ordinary course of nature is insufficient to produce any appreciable change; if,

however, man should set to work to grind up the granitic rocks, the rains of heaven would dissolve and carry to the roots of plants much value of mineral elements; but this would be a tedious and unproductive job.

Nature, however, by a primitive means which need not here be discussed, has ground down a certain portion of the rocky surface, leaving it closely compacted, and so largely similar in character to the truly solidified rock, and herein lies man's rich opportunity in aiding the great work that nature in her unbounded wisdom commenced. And the accomplishment of this make use of tillage as a means to that end.

Sethro Tull was a firm believer in the doctrine of tillage; in fact, so abiding was he in the faith that he made the claim that tillage alone was sufficient for the production of all crops, without manuring or fertilization other than came through natural channels, such as chemical changes, etc. Instances of continual cropping with thorough tillage, are recorded, in which the results are very uniform, even with no application of fertilizers. Now for the philosophy of the thing. As before stated, minerals must be soluble to be available; the more closely to an impalpable powder they become the more easily are they dissolved; now, if a soil is left to compact itself, become trodden down, or beaten down by descending rains, then it is brought into just such a condition as to increase the difficulty of dissolving out the mineral elements whenever the showers of rain do fall; every time the soil is stirred with the hoe, cultivator, plow or, harrow it becomes more and more broken up, ground down, disintegrated, admitting the free access of air and moisture, as well as the penetration of the little rootlets and spongioses that are searching for these elements required by the particular species of plant which they chance to represent. And in that is contained about all there is to tillage. Thus, it seems to be a wise provision of nature, after all, that thorns and thistles, or less figuratively speaking, weeds should grow to a greater or less extent, in order to compel a certain amount of tillage. The growth of weeds is by no means a sure evidence of fertility, for cultivated crops will fail where they grow, and yet remove them by constant tillage and a crop so treated will thrive unaccountably. So were it not for these aggravators, man with no obstacles to subdue would neglect tillage entirely, and no crops would be grown. With a natural tendency to indolence, a want of weeds would indicate no necessity for cultivation and no tillage be wanting. If any one doubts the beneficial effect of tillage, let him try it by the side of crops without any.

HORTICULTURAL.

We are indebted to Messrs. Ellwanger & Barry of Rochester, N. Y., for the following cut of a branch of the tree and description of that remarkably prolific and excellent apple, known as the "STUMP APPLE."



A very handsome and valuable variety which originated near Rochester. Fruit medium size, conical, skin yellow striped and shaded with light red, resembles Sherwood's Favorite; flesh firm, crisp, juicy, tender, sprightly, sub-acid. The fruit,

from its uniform size, fine appearance, and mild pleasant flavor commands a ready sale at a good price. A decided acquisition to the list of profitable market and good garden varieties. Tree of handsome, stocky growth and very prolific. Ripens in September and October.

Potomac Fruit Growers.

MARCH MEETING—1880.

This old Association, held its regular meeting, in Talmadge Hall, Washington, D. C., on Tuesday, March 2, at 12 o'clock noon; Dr. S. A. H. McKim, in the chair, and Dr. Howland, secretary, who read minutes of last meeting. There was a good attendance, and some fruit on the table, presented by Col. H. Pitts. After reading communications and electing new members, the regular order was called, which was the essay of Col. D. S. Curtiss, on the use of "Chemistry in Fruit Growing," which was agreeably to appointment at the last meeting. The essay occupied 30 minutes time, and was attentively listened to by an appreciating audience.

It was followed by an earnest and intelligent discussion, in which the essay was highly commended by the speakers, though some of them differed from some of the scientific doctrines of the essay; the debate was participated in by Messrs. Pierson, Pitts, Chase, Daniels, McKim, Weaver, the Secretary, and some others; several members asked that the essay might be printed, as they desired to preserve copies for future reading. Notice was given that a Fair and Exhibition would be held sometime in September next. Altogether this was regarded by those present as a very pleasant and profitable meeting. On motion, adjourned to the first Tuesday in April.

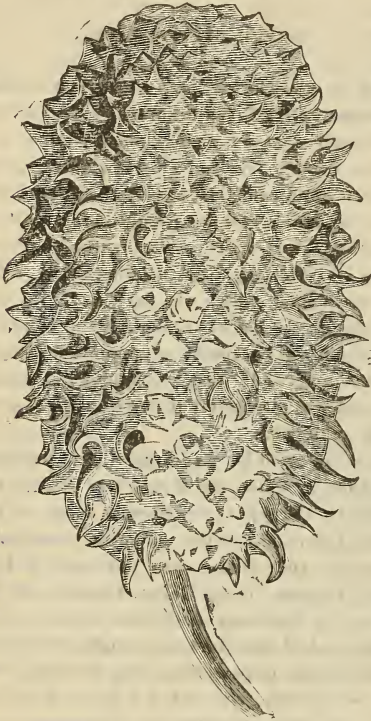
The attention of the Society was called to the MARYLAND FARMER—it was found that several members are subscribers, and others promised to become so, soon. POTOMAC.

In Russia the sunflower is cultivated for its seeds, which yield an oil that is largely used for culinary purposes, for burning in lamps, for soap-making, and as a vehicle for paints. One acre will produce fifty bushels of seed, yielding on an average fifty gallons of oil. In 1867 the Russian product of this oil amounted to nearly 17 000 tons.

Keep your farm buildings and all your premises absolutely clean. Use absorbents such as dry earth and ashes, and all offensive gases will disappear; thereby promoting health and prosperity.

A New Vegetable.

Messrs. B. K. Bliss & Sons, of New York, among many other novelties in the vegetable line, announce the maxixe, of which we present a drawing and what they say of it on offering it to the public this year for the first time in this country.



MAXIXE—natural size.

This new vegetable was sent us by an American gentleman now residing in Brazil, who describes it as being very extensively used as an article of food, either raw, used as a salad or cooked. There are various ways of cooking. It may be fried in butter like the Egg Plant. It is also used, boiled with meat or fish, and in soups. It may also be sliced and eaten with vinegar like the cucumber. For pickles when about half or two-thirds grown, it will be found particularly desirable. The cut shows the actual size of a full grown specimen. It should be planted on light warm soil, and treated precisely like melons or cucumber.

Jerusalem Artichoke.

We have often suggested to our farmers to plant an acre or less of Jerusalem Artichoke, by way of a trial, impressed as we are that it is valuable and well suited to many old fields and eyesores in Maryland in the shape of broken, gullied hill-sides

and barren spots, which once plowed, slightly manured, and planted with this tuber, would soon recuperate and yield annually an increased crop of excellent food for stock, with no labor except in the gathering of the crop. We give an article on this subject that we find in the *Fruit Recorder*. The statement of that writer is fully sustained by our personal knowledge of this plant, fifty years ago in Southern Maryland.

"This plant has not received that appreciative consideration from our farmers, to which its many valuable qualities entitle it. It may confidently be said that it stands unrivaled as a product of the farm, for the numerous advantages it affords to stock and to the land. Under the most indifferent culture it never fails to give an abundant yield, in the most unfavorable season, and on the poorest soil. In productiveness it greatly excels the potato, producing from 500 to 2,000 bushels of tubers to the acre; thus affording a larger quantity of nutritious food, and requiring less labor and manure to raise it than any other crop. Its nutritive qualities are second only, if not equal, to those of the potato. Cattle, horses, sheep, pigs, etc., consume the tubers, and also the leaves and stalks of the plant, with a keen relish, and fatten on them. The tubers contain, according to Boussingault, about 15 per cent. of uncrystallizable sugar, and the plant draws its nitrogen principally from the atmosphere. The stems when macerated yield a fibre which in some parts of Europe is manufactured into cordage and cloth. They may also be used as fuel when there is a scarcity of timber, being in this respect little inferior to corn cobs.

The cultivation of the crop is very simple. It is planted in rows about $3\frac{1}{2}$ feet apart, 2 feet between the hills, a small tuber or part of a tuber being sufficient for a hill. The crop may be set out at any time during winter or early spring. It is worked with the cultivator, like potatoes or corn, but requires less labor and attention, as its stalks, which grow to the height of 8 or 10 feet, soon suppress and outgrow the weeds. The tubers are harvested with little labor, since they grow in a compact bunch near the surface of the soil, adhering in a mass to the roots, which can easily be pulled up. They are not liable to rot, and no amount of frost injures them. Hogs will do their own harvesting if allowed to run on the ground when it is not frost bound. The tubers, when harvested, remain sound over winter with little or no protection against wet and cold.

This plant is well adapted to the Middle and Southern States, but it can be successfully raised in every section of the country. The roots if not cleanly picked from the soil will yield a volunteer crop the succeeding year. A little care, however, will prevent them from injuring other crops. On account of this tendency of the plant to perpetuate itself, it is advisable to appropriate a special patch for its exclusive culture. When so treated it has been known to yield abundant crops for a succession of thirty-three years, with hardly any attention, and with no manure.

From these considerations it is evident that the Jerusalem Artichoke is pre-eminently advantageous to the husbandman for two reasons, namely: for the raising of stock, and for the renovation and

preservation of the soil. As already stated, the roots, stems and leaves are greedily devoured by all kinds of stock. The plant is easily raised and harvested, needs no manure, and yields an enormous quantity of nutritious substance. It fattens cattle rapidly, and increases the flow of milk; horses eat it readily, and are kept in good condition by it; and hogs, when fed on it in connection with corn, remain healthy, and are soon ready for the market. It would be difficult to find a plant which, with the addition of a reasonable allowance of provender, offers so many advantages to the raiser of stock. On the prairies it could be produced with the least possible care, and would be an invaluable aid to corn as food for cattle and pigs.

Since this crop draws its nitrogen mainly from the air, needing little or no manure, and as it will grow on the poorest and most exhausted soils, it is obvious that worn out land can be renovated and kept in good tilth by raising this plant and feeding it on the farm. It therefore addresses itself to the favorable consideration of the agriculturists of the East and of the South, where land has so greatly deteriorated, and where under the present system of cultivation, it gradually and incessantly decreases in fertility."

Our Farmers Olio.

Imported Bonnie Scotland, the sire and grand-sire of so many celebrated racers in this country, died lately at Bella Meade Farm, near Nashville, Tenn.

Mr. R. Strattan's famous Short-Horn heifer Icicle—champion of Birmingham in 1877, and of Smithfield in 1878—was recently slaughtered. Her quantity of meat and lightness of offal have been attested by the fact that her dead weight amounted to the unusually high proportion of 78 per cent, of the live weight scaled by her at Birmingham in December, 1879.

There were 329 horses, costing \$23,920, purchased in Montreal, Canada, the last week in February, for the United States, showing an increase of 111 horses and \$5,400 in amount over the preceding week. So goes on the demand of this country to Canada for horses, to the utter shame of our farmers and stock breeders. Why in the name of common sense cannot our people raise more horses than we can possibly want. There is where the money goes, to buy horses and other things we can raise within ourselves, if we only had the energy and enterprise to do so. Well may our farmers say "hard times" and "farming don't pay" when they buy their work horses, their cows, and the meat they consume, all of which they could raise on their farms if they would.

THE WEATHER.—This winter has been unprecedented. While we have had an unusually mild one in this country, in Europe it has been corres-

pondingly severe. Great damage has been done to fruit trees and plants in Belgium and all over Europe, and singular is the fact the cold in the south of England has been severer than in the north and even in Scotland. If we are to judge from our correspondence from all sections in our favored land, no crops have so far been injured by its conduct anywhere, not even by its extreme mildness in the Middle and Southern States. But great damage may yet be done, the day of this writing, March 13, is cold and snowy and threatening to the swelling buds of fruit trees. We trust there may be no trustworthiness in the old "saws,"

If January calends be summerly gay,

'Twill be wintery weather till the calends of May.

If the green grows in Janiveer

It will grow the worts for 't all the year.

March in Janiveer,

January in March I fear.

One acre of turnips or mangels is equal to ten of grass for fodder, and when fed with straw, and helped out with a little bran or oil meal, roots are certainly the cheapest feed that can be produced.

Poultry.

POLISH, BEARDED OR PLAIN?—I am very glad to see that breeders are moving to do away altogether with the plain varieties of Polish. I do not even except the white crested black, for this is now being bred with a beard, and in a few years will reach the same perfection as the others. To add to the arguments of the breeders, whose article I have read, would be idle, for they are patent truths to nearly every one. If there was any decided difference between the plain and bearded, it would be well enough to keep them up. But when the beard is the only thing,—when the plain have to compete on equal ground in every other point on the score book, and are beaten every time, I think, out of justice to both breeders and judges, they should be dropped from the Standard. I am not in favor of tinkering at that great work unnecessarily. I do not speak with the voice of one having an axe to grind, for I breed both varieties of Polish, but as I for one see the manifold advantages of the bearded, I would gladly get rid of my plain birds to see things on a fair footing between breeders. In size, feathers, station, symmetry, and, last and not least, crest, the show is all with the bearded, and if they alone were bred, no breeder could feel mortified, as I did once, by seeing a fine pair of plain birds beaten by a second premium pair of bearded, simply on the advantages common to the latter breed.—T. B. DORSEY in *The Fancier's Journal*,

THE
MARYLAND FARMER,
A STANDARD MAGAZINE.

DEVOTED TO

Agriculture, Horticulture & Rural Economy.

EZRA WHITMAN,

Editor.

COL. W. W. W. BOWIE, Associate Editor.

141 West Pratt Street

BALTIMORE.

BALTIMORE, APRIL, 1 1880.

TERMS OF SUBSCRIPTION

One dollar per annum, in advance.

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Quarter Page.....	6.50	15.00	22.50	35.00
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TO ADVERTISERS

The large circulation of the Maryland Farmer makes it one of the best mediums for advertisers of all classes. Its circulation will be largely increased by our reduction in the Subscription Price, and hence add to its advantages as a medium for advertisers. The terms of advertising will remain as heretofore.

The Maryland Farmer will be read this year by more Farmers, Planters, Merchants, Mechanics and others interested in Agriculture, than any other magazine which circulates in the Middle or Southern States, and therefore is the best medium for advertisers who desire to extend their sales in this territory.

☞ We call attention to our Reduction in Price of Subscription.

TERMS.

One Copy, one year in advance,	\$ 1 00
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" " 20 " " " "	15 00
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SPECIAL PREMIUMS

For those who may Canvass for New Subscribers.

Any person who sends us 100 Subscribers, at \$1.00, will receive the world-renowned Howe Sewing Machine, with all the latest improvements. Value, \$50.00.

Any person who sends us 80 Subscribers, at \$1.00 each, will receive 1 Young America Corn and Cob Mill, worth \$40.00.

Any person who sends us 50 Subscribers, at \$1.00 each, will receive 1 of the celebrated Wheat Fans, which has taken nearly 200 premiums. Value, \$28.00.

Any person who sends us 25 Subscribers, at \$1.00 each, will receive a Roland Plow. Value, \$12.00.

Any person who sends us 15 Subscribers, at \$1.00 each, will receive a Farm Bell. Value, \$6.00.

Any person who sends us 12 Subscribers, at \$1.00 each, will receive a Remington Iroquois Revolver, full plated, Ivory. Value, \$4 00.

Any person who sends us 6 Subscribers, at \$1.00 each, will receive a Nickel-Plated Revolver, Long Fluted Cylinder. Value \$2.50.

THESE ARTICLES WE WARRANT TO BE FIRST-CLASS.

☞ It will not be necessary to secure the subscribers all at one time. For instance, if any one wants the Mill we offer for 80 new subscribers, he can send the names in any number he chooses, and we will allow him a whole year to finish the club.

☞ COL. D. S. CURTIS, of Washington, D. C., is authorized to act as Correspondent and Agent to receive subscriptions and advertisements for the MARYLAND FARMER, in the District of Columbia, Maryland and Virginia.

☞ Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

Evaporate your Fruit.

Our readers have doubtless noticed, that for some years past, market reports show a steady advance, in prices and demand for this article. The business of late has been receiving considerable attention, yet, not half so much as its importance demands. Many of our farmers and fruit growers seem to think that the profitable evaporation of fruit involves heavy expense, and great skill and experience on the part of the operations. This is not the case. In fact the farmer on his own premises, and by his ordinary help, is just where evaporated fruit can most profitably be made. Evaporating machines are now furnished at small cost, portable, complete and philosophically correct in principle, and so simple that any person of ordinary intelligence can operate them successfully.

No farm industry, that we can now recall, offers so promising a return for the money invested, as that in a practical fruit evaporator, and, with all the facts, and promises in the future tending to show, that the old style, unsavory dried fruits have had their day, prudent forecast suggests, an early purchase of some suitable apparatus, and the production of a product now commanding such profitable prices. We have seen the "American Fruit Evaporator," at work in this city and eaten the evaporated fruits, and can recommend it as the best fruit evaporator and drier we have yet seen. It prepares vegetables, such as sweet potatoes, tomatoes, &c., better than by the canning process. See advertisement in this number.

A BAD PRACTICE.—Several years ago, an enterprising publisher of a magazine, who had invested a large amount in its publication, not satisfied with a very large sale of its monthly numbers, sought to increase its circulation by preparing along with each issue, a florid notice to appear as an editorial review, in the columns of the rural newspapers. He was careful not to say any thing more than might be said by any partial editor. Since that time, this mode of advertisement has been followed by some second rate journals, with regular monthly notices of their own, and sent out to editors of newspapers to save them the trouble of writing complimentaries, and advantage has been taken to puff themselves and their journals, under the cloak of the editor of the various local papers, as their decided opinions, and thus many readers having confidence in the judgment of their county newspaper have been deceived by this trick into subscribing for what they perhaps would not have otherwise taken, had they seen the journal itself. We, therefore, say it has become a bad

practice, and we hope our brothers of the press will see this matter in its proper light, and hereafter discontinue the practice of publishing these stereotyped puffs. Every man has a right to advertise his paper, but he should do so over his own name, and await such notices as the intelligent press of the country voluntarily will give. We have always been grateful for any kind notices of our journal that our editorial brothers may voluntarily favor us with, but we would scorn to write compliments about ourselves, and solicit other editors to publish them as their own writing.

RARITIES IN THE MARKET.—On the 3rd of March, Mr. C. P. Tatem, of Tatem & Co., Commission Merchants of Baltimore, showed us large and fresh looking egg plants, just received from Florida, green peas and snap beans from Georgia, immense lemons from Florida, and stated that they could have had the egg plant in perfection at Christmas but did not choose at that time to put them on the market. On the 20th of March, Mr. Tatem had cucumbers and tomatoes from Florida. At the Maltby House, fine large strawberries have been on the table-de hote since the 24th of February, very often. These facts evince enterprise on the part of individuals and illustrate how surely time and space are annihilated by steam power. Such are the facilities of transportation; we now enjoy all the luxuries of our summer vegetable products and Tropical fruits, in the midst of winter's rigor. But for the outside look and the cold we have just emerged from in our outdoor walk, on viewing the dinner table we should imagine we were in the midst of summer, with our egg plants, peas, strawberries, &c., as fresh as we get them in market in June. It should be said these rare delicacies were to be had at very reasonable prices. In the second week of March, the Arabs were crying strawberries in the streets at 25 cents per quart.

THE liberality of the business men of Chicago by donations have enabled the Illinois State Board of Agriculture to determine to hold another Fat Stock Show at the Exposition building in Chicago, to begin on the 15th of November next.

THANKS.—An old subscriber, Mr. H. C. H., of this State, remits to us with kind words, his subscription to the MARYLAND FARMER for *three years in advance*. This unfrequent compliment is justly appreciated.

THE AGRICULTURAL INTEREST ON THE ADVANCE.—What we have long advocated we are glad to see is likely to come to pass. A bill is before Congress, reported almost unanimously by the House Committee on Agriculture, its chief to be a Cabinet officer, to be designated as the Secretary of Agriculture, and shall be in all respects equal to the other members of the President's Cabinet. This will dignify the occupation of the tillers of the soil, and render more efficient the Agricultural Department which has been so long crippled in its efforts. We have not the space to discuss this matter further at this time, but express our ardent wishes for the success of the measure. Another important step is to be taken by Congress, and we hope, by our Maryland Legislature, to as far as possible, provide means for stamping out the terrible cattle plague Pleuro-pneumonia.

THE Oleomargarine question is becoming an exciting one. Every one who owns a cow is interested in it. Butter-makers are striving to have legislation suppress it. If they feel that it will drive butter out of the market, they should be active, for this new substitute is making great headway. It is stated that \$600,000,000 pounds of Oleomargarine was exported last year to Europe, and 6,000 pounds per day is manufactured by the American Manufacturing Company of this City. A portion of the members of the Congressional Committees of Agriculture and of Manufacturers lately visited the works of this company, and were astonished and delighted with the superior quality of this article. The quantity of poor butter put on the market by our butter-makers no doubt was the stimulus for science and inventive genius to produce a substitute, said to be a fine article, resembling butter so much as to be undistinguishable by Committees after lunching at Rennert's. More of this anon, when we have more time and space.

For the Maryland Farmer :

Spring, Nitrogen, Clover, and Other Subjects.

ROCK HALL, KENT CO., MD.

Spring has come, (what a pleasant sound to the ear of one who enjoys everything connected with country life!) bringing with it green fields, which are a promise of food for man and beast. The opening of the buds and the spreading of the leaves and flowers will soon follow the above announcement. The creeping vines and leafy bushes will ere long afford the friendly sparrow a hiding place to build her nest and rear her young. The morning note of the red breasted robin perched on the

top of some lofty tree will be heard. The little, lively, cheerful wren will soon occupy his last year's quarters. The Oriole, with his usual mechanical skill, will be looking for some desirable spot to swing his cradle, and the fish hawk, with his quick and successful dive, will be seen with his struggling breakfast, in the shape of an eel or fish.

The time has come for work. The first peep of the sun should find one ready for labor. Oat and corn ground has to be gotten ready for the seed, manure hauled out and properly spread, and fencing put in order. The garden patch for a full supply of early vegetables, which are so necessary for health and comfort, should secure attention. These are some of the many things we have to attend to at this season of the year. When one decides that the rising sun is the hour to begin labor, and the setting sun the hour for rest, much can and will be accomplished. Industry and economy will tell, and without both, the chances for success are indeed slim. A lazy man will never accomplish much. Industry and hard labor, with economy and good management, will almost surely be followed by wealth. From the present aspect of affairs, every thing looks favorable for the farmer for some years to come. Now is the time to increase your crops. Make two bushels grow where only one can now be measured, and in order to do so, clover must be made to grow and draw from the subsoil the hidden treasure and then be turned under, thus affording every necessary element to the roots of the growing wheat.

Fertilizers are well in their place, but other conditions are important. A soil must be secured, and no quicker way of doing it can be found than turning under growing plants, which process prepares the food for higher ones, and thus changes the mechanical condition, so as to allow a free circulation of both air and moisture, which are just as important to vegetable life as animal, and unless the condition of the soil is such as to admit of both reaching the roots in full supply, a full crop cannot be expected. A good soil not only presents this condition, but furnishes a home for nitrogen.

In a letter, I recently received from Mr. J. B. Lawes, of England, whose reputation and authority no one doubts, and whose extensive investigations have imparted so much information throughout the wide world, he says, in the most positive manner, that our virgin soils must contain from 10 to 20,000 lbs. of nitrogen; and the immortal Leibig states in his Laws of Husbandry, that the poorest soil contains a hundred times, and a rich

soil a thousand times more nitrogen than what is necessary for a full crop. This does not seem to agree with the opinion of those who think that all offensive organic matter must be obtained from slaughter houses and elsewhere to mix with fertilizers. In order to obtain a small quantity of nitrogen, which during putrefaction is disengaged as ammonia. Enough organic matter to produce 2 per cent. of ammonia is the standard by law in some of the Southern States. To obtain this little, thirty per cent. of organic matter is introduced, twenty-eight per cent. inert, and two per cent. of an article which I have long contended is not necessary as an artificial application when the soil is in a proper condition to absorb and retain it from the great natural and only supply which surrounds the globe for forty miles, and which presses on it at the rate of fifteen pounds to the square inch. A few days ago in walking over the wheat field of my neighbor, in company with the owner, Mr. C. Wilkerson, I was struck with the remarkable growth of wheat in spots over the field, and enquiring the reason of it, he told me in those places he had the weeds, etc., raked and burnt. I have no doubt many of your readers have observed similar results. Surely no ammonia did this, unless the ashes absorbed it from the air. To enumerate all the evidences I have of this nature would occupy too much space; but in conclusion I will say that the best crop of clover I have ever seen grow on my place resulted from the application of fine ground bone ash, and from this crop I attribute much of the little success I have had in restoring a worn out farm. A portion of one field seemed to resist the influence of everything I applied, but on the application of a preparation made by the Tyson Chrome Works (South Carolina phosphate dissolved in muriatic acid and dried with lime) immediate effects were observed, and for several years past the best mowing and grazing land I have is where it was applied. No ammonia there; on the contrary, if there had been any, the lime would quickly have sent it where it came from, to the regions above. Mentioning this result to Mr. Wm. Tilghman, of Queen Anne County, he was induced to purchase some of the same to apply to his clover sod, and he informs me he has never seen such a crop on his land, and he has known it all his life. After mowing, the second crop was turned under, and he further informs me he has never had such a prospect for wheat. Reader, rest assured this is the plan to raise wheat. Turn under some growing plants containing all the mineral elements necessary for the wheat, but prepared for it by having passed through some other plant; just as the beef prepares clover and

grass for higher animals, or as the partridge prepares corn and other seed for the hawk, which would starve on corn. This is a long subject, and there is not time nor space to enter into it in this paper. Muriatic acid is a by-product of the Chrome Works, and if it is of real value as a substitute for sulphuric acid in dissolving bone, it may be of some interest to state that a phosphate containing twenty-five per cent. of precipitated bone in the finest condition can be obtained for from \$18 to \$20. In this mixture chloride of calcium (lime) takes the place of sulphate of lime, when the phosphate is prepared with sulphuric acid or oil vitriol. The former is very soluble while the latter is almost entirely insoluble, in water or anything else. The application of salt (being a chloride of soda) has in many cases proved to be the thing needed, and on the latter article I have something for another paper. A. P. S.

P. S. MARCH 20.—Since writing the above I have seen Mr. T., who fully confirms the reported condition of his wheat, and further says that it is far ahead of any in the neighborhood, even where a liberal supply of ammoniated phosphate was used. Certainly artificial application of ammonia can present no claim here. I have suggested to the Chrome Works to advertise the preparation, but they have objected, desiring first to know whether it possessed merit.

BALTIMORE VS CLEVELAND.—The conditions of a home and home match, for a gold medal valued \$15, have been concluded between H. F. Whitman, Baltimore, and the Cleveland, Ohio, Homing Club (J. C. Decumbe, E. Fox, Bernard Fox, M. Pender, and T. E. Gafney,) to take place, rain or shine, June 25—race to close at 7 P. M., June 26. Ten birds—five Baltimore and five Cleveland—are to be marked April 15, and none but those so marked are to engage in the final flight. Jno. E. Teal has advised us of concluding the arrangements for loosing the birds of H. F. Whitman. As some of the best stock in the country will be represented in this race, the training and conclusion will be watched for with more than ordinary interest.—*The Fancier's Journal*.

FARMERS' MAGAZINES.—The MARYLAND FARMER for February is received as usual. It presents a combination of agriculture, horticulture, and rural economy, together with various literary topics, and ought to be an indispensable article in each farmers household.—*The Record*.



Live Stock Register.

Wellington 2d.

In this issue appears a cut of the beautiful Clydesdale Stallion, Wellington 2d., owned by Smiths & Powell, of Syracuse, New York. While a horse of rare form and beauty, with fine action and style, he is also of the best breeding, a rich, dark bay, with black joints.

This class of horses deserves especially the attention of farmers and breeders in this section, and should be well represented by them. Where known, the Clydesdales are esteemed for their fine forms, elegant carriage, style, action, powerful limbs, bone, muscle, and gentleness. Messrs. Smiths & Powell have a very large and fine assortment of these horses of all ages, among them several imported ones of very extra breeding. They send catalogues to applicants and solicit correspondence.

We learn that this company has lately made sales of the following fine horses: Imp. Clydesdale Stallion, Donside Champion and Lady Netherby a Clydesdale filley to Mr. George W. Palmer, Va.; one span of mares to Mr. S. Marrvell McIntyre of New York; one span of mares to Mr. Chas. W. Stuart of Newark, N. J.; Hamiltonian fillies, Grace and Victoria, by Reveller, and Finesse, by imp. Consternation, to P. T. George, Esq., of Balt., Md.

For the Maryland Farmer:

The Comparative Merits of Cotswold Sheep with Other Varieties.

It is (not at all) surprising that there are so many enquirers for Cotswold sheep, when their pre eminence above all others for wool and mutton is so well known and is so apparent on the face of it, from their superior appearance, as well as their more remunerative returns to their owners. The maximum weight of the carcass of an extra animal sometimes reaches over 400 lbs., and well fed flocks will average from 150 to 250 lbs. straight along, and will yield from 10 to 20 lbs. of unwashed wool to the fleece. We challenge competition with any other variety, and claim them as indigenious to the soil of Maryland as even the Southdown, or perchance the superior Shropshire. Upon crossing the Cotswold with any other variety you decrease its size as well as its fleece—vice versa, you will increase both the size and the fleece of any other. The fastidious epicure may doubtless distinguish the more delicate flavor in the mutton

of the Southdown or any other variety of the middle-wools, except where the par excellence is maintained by realizing more mutton by crossing them, the middle-wools with the Cotswold. For the masses and for general use no ordinary taste can distinguish the difference, and as a greater amount of mutton can be realized from them, and almost double the quantity of wool to the fleece, there remains no question of their superiority over all others as a combined mutton and wool sheep.

They luxuriate upon a well soddied timothy plat in the Sunny South as upon the blue grass regions of Kentucky, and where any other variety will meet the results of surrounding circumstances, they will do so as well, and we are, willing, too, to admit that they cannot be kept in the same numbers, as the smaller varieties, but claim that more wool and mutton can be grown to the acre than any other kind except, perhaps, the improved American Merino, of which we will treat further on. It must be remembered that live stock are grosser feeders in proportion as they are larger, therefore, if 3 Cotswold sheep will weigh as much as 4 Southdowns, you have still a more economical sheep, because in the same weight you have less bone and offal, and about 40 per cent. more wool, as a good Cotswold will shear almost double the best middle to the fleece. Now as regards the improved Merino (the weight of fleece being accepted as legitimate, although there is a large per cent. of gum and grease in it) I will give it its just dues. They will shear of such wool (but far less when washed) as much as the best Cotswold per fleece, and can be kept in the proportion of 5 to 3 with the Cotswold, and in such calculation you will get the weight of 2 fleeces extra from the Merino, and as much mutton, such as it is, less a far greater per cent. more of offal and bone, less also a few cents per pound in the price of the wool; intrinsically, if the wool be washed it will weigh less, and considering the character of the mutton, they must also take a back seat, but one great thing in favor of Merino is, they can be kept in larger flocks with impunity and without becoming diseased. Now to show the predominance of Cotswold over them, after having made such admissions as we have. You may doubtless think it a contrary to try, but if you will cross a large size and heavy shearing Cotswold ram on Merino ewes, you will increase the size of the Merino and get also as much wool to the fleece, because the off-spring can not go astray for it, as both the Cotswold and Merino are heavy shearers, and getting as much wool to the fleece and more mutton to the single animal is an evident conclusion that Cotswold predominates, and having an infusion of the Merino stock

in them ensures them to be kept in large numbers in safety. Use a pure bred Cotswold ram on common Western ewes, and the good points of the sire are almost sure to predominate, as pure stock is more prepotent than common, but use a grade sire on such stock, and activism is almost sure to crop out, and the off-spring will occasionally revert back to the defects of a scalawag ancestor.

Whatever breed is made a specialty of is generally the hobby of such a breeder, and one is apt to be blinded to the defects of his pets, yet we have tried to give as impartial a version of their comparative merits as we know how, and will further urge the use of thoroughbred Cotswold rams on your Southdowns, Shropshires, or Merinos, and my experience proves that more wool and more mutton combined can be obtained, than breeding exclusively the smaller varieties together. Now that wool commands a good price and manufactured goods are a necessity, why should any farmer fear to engage in so lucrative an occupation as sheep husbandry. I have been breeding improved Cotswold for 3 years, and have them to such perfection that 14 to 20 lbs. is an average weight to the fleece. There is no stock or crop raised on the farm that will give as handsome returns to the owner as a well kept flock of Cotswold sheep, provided you have a good timothy sod; you can graze your wheat field, to the great advantage of your fleece and lambs, and yet not lose anything therefrom, as sheep are said to destroy Hessian Fly, and even should the crop be somewhat lessened thereby (which we very much doubt, if done with good judgment) you will be richly repaid in extra fleece, fat mutton, and plump lambs. In conclusion we wish it well understood that where the Cotswolds pine for want of sustenance all other varieties will suffer in proportion; and they are well adapted to the wants of the general farmer.

Kent Island, Md.,

Yours Respectfully,

March 16, 1880.

ED. C. LEGG.

The Chicago *Times* publishes comprehensive reports from eleven States in the Northwest concerning the winter wheat crop, of which the following is an analysis: "Taken altogether, the estimate is a safe one that the increased yield in the eleven States will be about sixty per cent. It is however, to be taken into consideration that much depends upon the weather for the next three weeks. In nearly every locality the dearth of snow is deplored, but should no severe changes occur, the winter wheat crop will be a bounteous one."

Great Importation of Hereford Cattle and Shropshire Sheep from England.

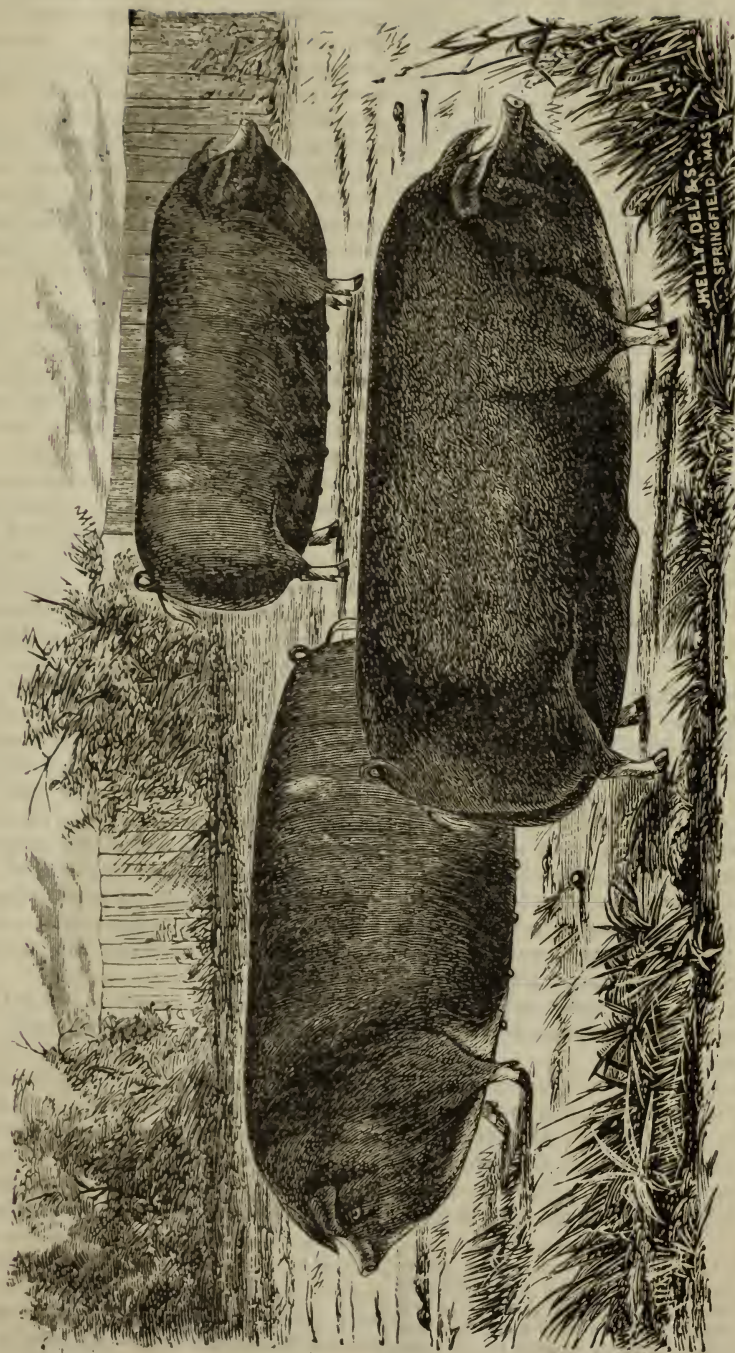
In "The Chamber of Agriculture Journal and Farmers' Chronicle," a leading agricultural paper published in London, England, we find the following interesting statements:

"The demand for meat on this side of the Atlantic and the manner in which the broad ocean has been bridged over by the numerous steamships conveying both live and dead meat to our shores is felt in America, and has induced a strong desire to improve the herds on the vast prairie lands of that great country by the introduction of our pure bred meat-producing animals. For that purpose the Herefords appear to be rapidly gaining favor as being pre-eminently adapted for crossing the native cattle, and on account of their docility and aptitude to fatten have proved themselves to be amongst the most valuable for the grazier, not only upon the almost boundless plains in the far West, but also in the more rigorous climate of New England and the middle States. It is now many years since the red with white faces were first introduced into the United States, but until recently they have not met with such ardent admirers as their more favored fashionable rivals the Shorthorns. Now their value is rapidly becoming more appreciated, and they bid fair to be placed in the foreground.

Mr. H. C. Burleigh, of Fairfield Centre, Maine, has made a large and important selection for himself and Mr. J. K. Bodwell, of Hallowell, Maine. Mr. Burleigh has been for several years a distinguished breeder, ardent admirer, and successful exhibitor of Hereford cattle from imported blood. He has now made the personal acquaintance of many of the most distinguished breeders on this side, and purchased a large selection of valuable animals. In doing so he has studiously followed the Herd Book for pedigree; at the same time he has refrained from purchasing any over-fed animals. His selections are from the herd of her Most Gracious Majesty, and other well known herds."

This paper goes on to give the pedigrees of two bulls, thirty-nine cows and heifers, three bull calves, and five cow calves, in all, forty-nine or fifty. The largest importation ever made of improved stock at one time in this country. Some of the cows are among the most noted Herefords in the Kingdom. The article quoted from concludes thus:

"Mr. Burleigh has for several years past been a breeder of Southdown sheep; in addition to those he has now resolved to try the Shropshire, and for that purpose has selected a choice lot of young ewes and two rams of distinct blood from the celebrated flock of Mr. Palley, Lower Eaton, Hereford."



MODEL HERD OF FINE-BRED POLAND CHINA SWINE OF THE BLACK BEAUTY STRAIN.

Poland China Swine.

This breed of animals are of the "Black Beauty" strain of blood, and are owned by Alfred Riggs, of Suffield, Connecticut, who has a fine breeding establishment under the management of B. C. Platt, a swine expert of high standing. The boar shown in the engraving is "General 2nd," weighing 720 pounds; the sow on the left is "Suffield Beauty," weighing 510 pounds, and the sow on the right is "Farmer's Pride," weighing 260 pounds at seven months old. These form a group of animals fit to delight an eye trained to porkiness in a hog. The ideal of perfection in porcine shape is in part in the suppression of the waste parts, and the development of the useful parts. It may be said that the nearer the animal approaches the outline of a pork barrel the truer it is to acme of available substance. These animals having their longish bodies fully rounded out and being squarely built out fore and aft, approach closely to this model, and if one cuts off a few pounds of snout and feet from the dressed animal, the remaining substance, round and solid, is well fitted to fill out a barrel if the barrel were only large enough to contain it. See advertisement of this stock in this number.

Holstein Cattle.

A correspondent of the *Journal of Agriculture*, writes the following, as his claims for this breed of cattle now being introduced so largely into the dairy regions of the West:

1. They are the most hardy. Coming from a cold climate, they stand our Northern winters better than any other pure breed, not even excepting the judge's "American breed," the scrub.

2. They are the most hearty feeders, and will turn to a greater profit the rough feed. The calves take to drink and eating without coercion or moral suasion. It would be a rare case, not one in fifty, where fasting one meal, would not drink the second. They are rapid growers, because they are hearty feeders.

3. They are not grain pampered, and will give better returns for good hay and grass. For this reason they are more vigorous as breeders. They are strongest, and best defined of breeds, hence, the best for grading purposes. They will transmit their characteristics with certainty on any breed or grade.

Prof. L. B. Arnold of Rochester, in a recent paper on the dairy interest, said a good cow ought to produce 8,000 pounds of milk yearly. In this country the average is only a trifle more than half that, while in Holland 10,000 pounds is a common yield.

OUR LETTER BOX.

We are glad to see a growing desire among our subscribers to seek information from others of experience, and a greater willingness to communicate their views, experiments, and results of trials, to their fellow farmers. We hope and expect our correspondence will go on increasing.

The interchange of views, theories, and practical results between farmers constitute the better part of the life of an Agricultural Journal. We give the following extracts from letters lately received from prominent and practical farmers in different portions of the country, on different subjects.

Of "Horse-Tooth Corn," Dr. Jno. Peach, of Prince George's county, Md., writes us that "As I promised to give you some account of the Horse Tooth Corn procured at your suggestion last spring, I will now do so. I measured three flour barrels and one bushel of ears, just as I would sell it to a neighbor, not giving, perhaps, as heaping measure as many buyers would ask for. I then shelled it and found the weight of the cobs to be 44 lbs.—the shelled corn weighed 337 lbs. It measured $6\frac{1}{2}$ bushels. I tried to be accurate, and think you can rely on the figures. I will also add that before measuring the ears I took off a few grains from the small end of some of the ears.

The shelled corn presents, I think, a finer appearance than the seed did when I got it last year.

Mr. Jos. Walker, of same county, certifies that he measured one-half barrel of this corn grown by himself, and taken indiscriminately from a large quantity, grown on several acres. The half barrel was one with the stamp of the measure of the State; after shelling, the cobs weighed 21 lbs.—42 lbs. to the barrel, and a standard measure half-bushel of shelled corn weighed 27 lbs.—54 lbs. to the bushel. The corn shelled fully 6 bushels or more to the barrel of ears.

[The usual weight of cobs to a bushel of corn is allowed to be 14 lbs.—EDS. MD. FAR.]

THE LINDSAY SEED CORN, OR HORSE-TOOTH CORN.—Having the past season planted the above corn, and at my suggestion induced Mr. Whitman to procure some, it may be proper to report the result of the new seed, stating its advantages as well as its drawbacks. My object has always been to obtain a corn that would give the least cob and most corn, and I have carefully and accurately examined any desirable corn I could hear of, but have failed to find any to equal the above, and feel justified in saying, after weighing a number of ears, that it will average 60 to 61 lbs. of clear

corn for seventy on the cob; in some instances I obtained 63 lbs., the standard being 56 lbs., but in many cases from such as is known as Mammoth corn (short grain and big cob) I have obtained but 54 and 55 lbs. The stalk is a great grower, often having two or three ears on it, (no advantage in this) and with me averaging ten to twelve feet high and thick in proportion, which is one of its drawbacks, and this may be the cause of it failing to mature as early as desirable for this latitude, although I am glad to say that all I have seen of it has been perfectly sound and in good condition, and makes most excellent meal. For good land south of Baltimore I would prefer it to any corn I know of, but owing to its lateness in maturing, would advise caution north of this latitude. As many planted it last season I would like to hear the result with them.

A. P. S.

Rock Hall, Md.

SWEET POTATOES.—Dr. J. A., of Georgia, writes to enquire, "How is the most economical way to obtain early sweet potato plants for early planting, with the least expense and inconvenience? This is a question that is revolving in my mind at present and I wish some good, charitable soul would tell me how to do it and all about the crop, as to its cultivation, etc."

[We hope some of our readers who have experience will answer this anxious enquirer through our columns. The practice pursued in this section is to form a hot bed about the first of April, and use glasses until the sprouts appeared, and then the glass was removed if the weather was pleasant.

On the manure of the hot bed lay three inches of good garden soil. After it has been heated a day or so, lay on it, after being moistened with tepid water, the tubers or small roots, close together; as soon as the tubers show sprouts, cover them with mould and sand mixed, to the depth of an inch or little more.

"Treat as for other tender plants in the hot bed or forcing pit, and the sprouts or slips will be ready for planting out by the first of June." That is the northern rule, but bulbs of this root will be in the South, ready in 6 weeks after being put in a proper bed, for planting out the sprouts or slips they will send up. Market gardeners make great profit by raising slips for planting. The sprouts from the tubers in a bed rightly managed come up quickly, and it would seem as often as they are pulled for planting they put out other sprouts.

"As the sprouts from the tubers come up quickly, repeated trimmings are made, which is not only profitable to the grower but of great advantage to the remaining plants, by giving them the necessa-

ry room to grow." The growing of these sprouts is a very profitable business with market gardeners in the North, and they have heretofore done a great business by raising this habitat of the South in slips and selling them to the people who can by reason of their locality produce the best sweet potatoes in the world. We wish some of our subscribers in the lower counties of Virginia or Maryland would tell the world exactly how to propagate the sprouts and how they raise this popular and delicious vegetable, and how to keep the tubers over winter, and not keep the secret to themselves. We hope to hear from our liberal minded growers soon.

PROSPECTS OF THE WHEAT CROP AND FRUITS FOR THIS YEAR, ON MARCH 15.—Desirous to give our readers a reliable estimate of the prospects of the wheat and fruit crops about the Ides of March in this remarkably mild winter in this region, we have been at some pains to ascertain the facts, by correspondence with many prominent farmers and fruit growers in this and other States south of Maryland, and give our readers the following letters, which will be read with much pleasure, we feel sure. The communications on these matters of Messrs. Porter, of Virginia, and Benbow, of N. Carolina, will be found elsewhere in these pages.

Rose Hill, Washington Co., Md.,

March 15th, 1880.

In reply to your inquiry with regard to general appearance of the wheat crop in my neighborhood, I will state that the promise at this time is most favorable for a good crop. In comparison with last year it is much more advanced—probably as much so as the year before, when it was somewhat injured, while in bloom, by the frost of 12th May. Its present condition is due to the mild open winter, and abundant rain.

To guard against the ravages of the fly, our farmers sow later than in former years—beginning generally from about 25th September to 1st October, and the commencement of winter found the crop short and thin, on account of the drought of the fall; but with the exception of one or two short cold spells, it has had nothing since to retard its growth, and its dark green, healthy appearance as now seen, in contrast with the mantle of snow that partially covers it, gladdens the heart of the farmer at the prospect of another year of prosperity before him.

The general use of phosphates and ground bone (principally the latter) and better seasons have caused the large average increase in the wheat crop of this country in the last four years. The

acreage sowed, I think, is greater than the last by probably one-fifth.

Wheat being our principal crop, the market is watched with a great deal of solicitude by our farmers, and our great railroad facilities enable us to get within eight or ten cents of Baltimore price. In this connection I may add, while we are a *peace loving* people, "a speck of war," at a distance, is not regarded unfavorably by us, and the general sentiment is, we "had rather feed than fight them."

With regard to the *fruit*, I think it is yet uninjured, as the warm spells have not been of sufficient duration to force it forward enough to be injured by the frost. Mild winters, however, like this, generally prepares it for early blooming, and renders the crop precarious until after the frosts of next month.

Respectfully,

ALONZO BERRY.

Howard Co., March 15th, 1880.

The wheat crop was very backward in the fall owing to the continued dry weather at seed time and afterwards, but the warm, favorable, growing weather of winter, with frequent rains, has given it a good, healthy growth, and if the fly, which was abundant in the fall, during the long dry, warm weather—now the most to be feared—should not prove destructive, our crop will be an average one throughout the county, say 15 bushels per acre.

The peach buds started during the warm weather of the last week in February and first week in March. The great height of the temperature is hardly credible, unless to an actual observer and recorder: it was 69° during the day Friday, Feb. 27, and 66° the day previous; 65° on Sunday, 29; 72° on March 4, and actually reached 76° (summer heat) on Friday, March 5. The effect of these temperatures was necessarily to push forward vegetation and furnish conditions for continued growth. Since then the lowest temperature has been 24°, on Saturday, March 13, 8° below freezing. What effect this has had cannot yet be determined, but I do not fear results, owing to the small growth of the bud, and the moderate degree of cold. From present appearances I think we are justified in expecting an average fruit crop, which I confidently predict.

D. LAWRENCE.

Kent Co., Md., March 13th, 1880.

Eds. Maryland Farmer:—The present prospect for wheat in this neighborhood has not been better for the last fifteen years. The prospect for fruit is not flattering, in my opinion: the buds are well advanced and an early bloom is expected, consequently the greater danger from

frosts and cold storms. Labor is plenty at reasonable prices. The grass is green, and early lambs will soon be in your market, and the farmer who raised them will only regret he had not double the number. Truly,

A. L. C.

Bel Air, Harford Co., Md., March 12th, 1880.

Eds. Maryland Farmer:—The wheat in this neighborhood looks remarkably well, and is good throughout the county. The area is as large and the prospect better than last year.

The early sown had some fly, but the danger is not serious nor general.

As yet the fruit buds seem uninjured. Last year we had very full crops of pears, and are not hopeful for the coming season.

Snowdrops, Crocus, Forsythias have bloomed, Japan quinces are coming in flower, fields looking green, though sprinkled with snow.

Very Respectfully, HENRY D. FARNANDIS.

Pineland, N. J., March 15th, 1880.

Eds. Maryland Farmer:—The wheat that was sown last autumn is looking finely, as also the rye. I do not know when I have seen either look better at this time of the year.

The fruit prospects generally are uncertain, on account of the early warm weather prematurely developing the fruit buds. The peach blossoms have already swelled ready to open.

The experiment tried last year of guarding against the *grape rot* by roofing over the vines, or by enclosing the clusters in paper bags, was so successful it will be tried on a large scale this year. To be sure of success it is done as soon as possible after the blossoms fall. One of our large farmers is now making the bags for his vineyard, on the scale of twenty clusters to a vine. When these are enclosed all the others will be cut off. The result of this trimming will be favorable of itself.

I am extending my quince area over 150 more trees, encouraged by the successes of the past. Now is the time to plant the cuttings as well as the trees. Most truly,

W. W. MEECH.

The Plains, Va., March 11th, 1880.

Gentlemen:—The wheat crop in Virginia is more promising than I have ever seen it in an experience of forty years. In some of the heavy wheat growing N. Western States it is badly winter killed.

The fruits of all descriptions in this section is safe as yet and I don't think forward enough to be in any immediate danger. Very respectfully,

ROBT. BEVERLEY.

Montgomery Co., Md., March 17th, 1880.

* * * * It is too early by some weeks (a month, should the present weather continue) to pass any opinion upon the fruit crop of 1880 in this vicinity. The buds are not destroyed as yet, but a sleet, a stinging frost is liable to blight them at any time before the 1st of May. The general outlook, as compared with former years, depends simply upon the progress of the season.

As to the appearance of the wheat crop, a different and more satisfactory answer can be returned. Owing to the peculiar fall, the driest known here for years, the soil was in a worse condition than usual at time of sowing, nor was there sufficient moisture to germinate the seed properly, and when winter set in the fields gave less promise than for several years. But an exceptionally mild winter proved favorable, and the warm spell two weeks ago produced a vigorous growth and rich green that augur well for the future. The wheat is not so forward, nor the plants so thick in the drill as we often see, but they have tillered beautifully. The deficiency is in timothy, which is on many farms almost a total failure, the drought having killed it.

ALLAN FARQUHAR.

Nashville, Tenn., March 15th, 1880.

Eds. Maryland Farmer:—In reply to your inquiries in reference to the wheat crop of this State I have to say that at least twenty-five per cent. more wheat was sown last fall than at any previous date in the history of the State. Its general appearance is excellent. It has stood the winter well, has tillered finely, and is now as far advanced as the crop is usually a month later. In a few localities some complaints are made as to the ravages of the grub worm and a small purplish serrated worm about one-fourth inch long, whose classification I am unable to determine myself, are being determined by experts. The damage, however, from both these sources is infinitesimal. The greatest danger to be apprehended is from late frosts and rust. We have had excessive rains, and a considerable amount of wheat has been injured in low places by standing water. To give you an idea of the amount of precipitation, I subjoin the following comparative statement from the Signal Service Bureau at Nashville:

	Inches.
1873.....	49.47
1874.....	58.14
1875.....	53.49
1876.....	46.01
1877.....	40.61
1878.....	48.56
1879.....	57.69

The average for those years was 52 inches. The rainfall in November, 1879, was 5.85 inches; De-

cember, 1879, 9.15 inches; January, 1880, 3.74; February, 12.37; total rainfall, 31.11; total for January and February, 1880, 16.11 inches.

It will be seen that for the three months ending February 29th, we have had double the usual average. Since the beginning of March we have had an additional six inches. I greatly fear the compacting of the earth, resulting from so much rain, may give a check to the future growth and yield of the wheat plant, while the extreme succulence and softness of the cellular tissue may prove an easier access to the penetration of the rust spores (*puccinia graminis*) into the stomachs of the interstices. So luxuriant has been the growth that nearly all the sheep and cattle in the wheat growing districts have been wintered upon the wheat field. I have a flock of sixty sheep that have been fed only five days during the past winter.

Fruit has not been injured up to the present time. The most critical period seems during the month of April and the first ten days of May. Some few peach trees are reported in bloom.

I was made glad by the sight of your periodical, which I read with so much interest when I was editing the *Rural Sun*. I find that it still maintains its high character, and the articles are of singular excellence and merit. J. B. KILLEBREW.

Newark, New Castle Co., Del., Mar. 18, 1880.

Eds. Maryland Farmer:—I will state that the acreage of wheat put in last fall in this county was at least 10 per cent. larger than in 1868, and its appearance now is very fine. The mild winter and abundant rains have brought it forward very rapidly, and the general appearance is equal to that of last year by April 20th.

Fruit thus far is uninjured in this county, and from the poor crop last year, giving the trees an opportunity to make growth, and the dry fall ripening up the wood, the prospect is good for a heavy crop of all kind of fruit. Farm stock are coming out of the winter in good condition, and the mild winter enables most of our farmers to carry their stock through without the purchase of feed, as we feared last fall from the deficient crops of hay. Taking all things into consideration, the outlook for the farmer is very encouraging for the ensuing season.

Yours respectfully,

EDW. D. PORTER.

Frederick Co., Md.

A private letter to a friend states: "The wheat crop all over this county is finer than for many years, and so forward it looks as wheat usually does in May—many farmers are grazing the wheat with sheep and small stock."

Near Griffin, Ga., March 15th, 1880.

Eds. Maryland Farmer:—The wheat crop is very promising in middle Georgia. Both wheat and oats are looking better than last year at this date. When land has been well prepared and manured, we find that forty bushels of wheat per acre has often been harvested.

The fruit crop promises well; being cut off by frost last year, the trees have put on a vigorous growth, and as lightning seldom strikes twice in the same place, we expect to escape frost and make a fine crop this year. One farm in our county has planted about 400 acres in fruit; others are beginning to find that we can lay Florida in the shade in profitable fruit growing, and are covering broad acres with peaches, pears, apples, grapes, and other fruits for New York and other markets. I visited a friend lately who has ten acres in strawberries; he finds them a profitable crop. If any man doubts about Georgia being the best fruit country in America, let him come through here next July, and they will see what is what. Yours truly, W. W. WOODRUFF.

Herndon, Ga., March 15th, 1880.

Eds. Maryland Farmer:—* * * * We have passed a most unusually warm winter. The weather has been really abnormal in this section, on 33d parallel of latitude. We have, with exception of a snow in November and a little ice in January, had no winter.

The difficulty to a laboring man or one engaged at work has been to keep cool, not to protect himself from cold. The consequence is that all vegetation is out almost a month in advance of the season, and in just such a condition, if freezes should come (as often in April) we will lose our fruit crop, entire, and many other serious losses would be witnessed in early vegetables, etc. Grain of all kinds is far advanced. The rye put in (during September last) was blooming in Feb. and even later is ready to cut for green soiling and hay purposes; oats equally ahead of ordinary years, and wheat in same very forward condition, ready to be seriously injured by late frosts and freezes.

The critical period is now upon all grain and fruit crops, and if we tide over this month safely, there is a prospect for fine returns in all these crops. A dry spring is very necessary to us for a fair wheat crop, and in this immediate part of our State this crop, so precarious, does not enter into the results of farming as an important crop.

Yours very truly, W. B. JONES.

Wheat and Fruit Prospects.

IN MARYLAND AND VIRGINIA.

Editors Maryland Farmer:—So far as present information indicate, the prospects of early fruits, such as apricots, cherries and peaches, are that we shall have abundance, unless Woolsey's untimely frosts shall nip them in the bud. I have visited some orchards, and made enquiries of owners of others, and find the trees are unusually loaded with fruit or blossom buds; and the danger now is, that the trees will be over-burdened; but that may be remedied by early thinning-out freely, say when the young peaches reach the size of chesnuts and plums; the remaining fruit will be much larger and finer, more than enough to pay for the time of doing it, and the trees will be less exhausted, for next year's crop.

The wheat is everywhere said to be looking well, as it should, if well put in, after such a favorable winter, and the present moist opening of spring is also favorable, and destructive to the fly, where it happens to exist, as wet weather troubles that insect—it delights in "a dry time."

I have heard of its presence in one or two counties of Maryland and Virginia, to a small extent. In some cases, and pretty generally, a sprinkling of two or three bushels the acre of fine lime on the growing crop, evenly spread over the whole, pretty effectually destroys them, and prevents serious injury, particularly if applied when the young wheat is wet, or just before rain, which forms lime water, that runs down the stalks and leaves—and the Hessian fly can't stand the caustic ley.

D. S. C.

Washington, March 1880.

[We have letters of like character from Dr. DeCourcy, Major L. Giddings, and others, which have come to hand too late for insertion, which we regret much. Our thanks are due, and we proffer them to each of our friends who have kindly furnished us with facts as to the crops.—Eds.]

The Cow Pea or Agricultural Pea.

In answer to several enquiries about the Southern Pea as a fertilizer, we give all we know about it, deriving our knowledge from experience of many years on our own farm, and from the writings of many who have tested its properties as a fertilizer. We also give the approved methods of culture:

If this Pea, which is known by many names, having a synonym for every locality, is intended to be grown for the seed, it should sown in drills

30 inches apart, and three or four peas dropped about 18 inches apart in the drill and covered 3 inches deep with the hoe, like corn, or with a small plow, and the ground should be prepared as for corn, and in good heart, or if poor, should be manured. After the peas are up, they can be cultivated with a shovel plow or cultivator, to keep down the weeds, until the vines cover the ground. When the major portion of the pods are fully ripe, the vines may be pulled up or mown and allowed to dry, and then hauled to the barn or stacked in small cocks in the field until well dried. When dry enough they can be beaten or flailed out, and cleaned in a fanning mill. The vines can be put under cover or stacked, and well covered with straw. This pea-fodder is relished much by sheep, colts and calves, and is very nutritious provender. The yield per acre will range from 15 to 40 bushels, and worth from 50 to 90 cents per bushel. They should be planted about the middle of May.

If sown with a view to renovate the land, after plowing the ground and harrowing, lay off two inches deep and three feet apart, then drop in the furrow every short step a dozen peas, or sow them thinly in the furrow. Cover with two light furrows, and after the peas are up, break out the middles, and after that one working with the cultivator will be all that is needed. When the crop is young, sow a bushel of plaster to the acre over the vines. They can be thus sown or planted at any time between 10th of May and 15th of July. Gather as the peas ripen, by hand, what may be wanted for seed, you will get 10 to 15 bushels per acre. Before the vines begin to dry, cut them for hay for stock, or plow them under as a green manure for wheat. The advantage of the pea-vine as a manure for wheat, is its cheapness compared with bought fertilizers, and the expense and of procuring and spreading stable manures.

Another convenient way of sowing these peas for the amelioration of the soil and rendering it peculiarly fit for the production of wheat and clover, is at the last cultivating of the corn to sow peas at the rate of $1\frac{1}{2}$ bushel per acre. The working of the corn with the cultivator covers the pea deep enough. The sowing can be done by hand broad-cast, or carrying the hand of sower low so as to distribute the peas between the rows. This system of pea-culture is best adapted to corn land, when the corn rows are 4 or 5 feet apart one way. If the corn is cut off as soon as it is well glazed, as it should be in the early part of September, the peas will make a rapid growth so as to produce a large amount of haulm or green matter to be plowed under by the 10th of October, which is a good time for sowing wheat. When wheat follows a

heavy crop of peas we would advise 10 or 12 bushels of lime to be applied broad-cast on the peas when turned under by the plow, and the land rolled before winter with a heavy roller, and rolled again before spring, after the severe frosts are over or when the grass seeds are sown among the wheat. As to the regenerating effects on the soil by turning under peas, there is abundant evidence by practical men, and we have, by sowing peas and turning them under, restored to fertility acres of poor land. Chemical analysis has proven that in all the essential elements of plant food, the pea is very nearly as rich as clover. Clover has in its tap-root, and other roots a great advantage over peas as a renovator of the soil, by the supply of humus and the ingredients it contains, but it takes a year for clover to be effective, while four months is all the pea requires to furnish nearly as much plant food and fertilization and as large and valuable a quantity of food for the domestic animals of the farm. In a Southern clime, this plant in many respects is superior to clover as an economical restorer to worn out soils. It will flourish where the soil is too poor to grow clover—it gathers as much ammonia from the air as clover—fattens stock as well, and is grown in less time, with less labor and expense, and on poorer soil. We cannot, too highly, laud its many good qualities, and cannot let this brief notice pass without adding that in the green state these peas prepared as garden peas, make an excellent dish, and the dry peas in winter make fine soup, and boiled with a well cured jowl or nice midling form a dish not to be despised by even the "Autocrat of a Breakfast" or dinner table. We confess that from all we know of this vegetable, we are enthusiastic as to its wonderful virtues, and wonder why it is not extensively cultivated on every farm, from Mason and Dixon's line to tropical Florida.

LADIES DEPARTMENT.

Chats with the Ladies, for April.

BY PATUXENT PLANTER.

"Ah see the bluebird comes from sunny clime;
The robin's flute from hill and dale is heard;
The maple buds burst forth, while every bird
Sings out with notes far sweeter than the chime
Of unklung bells in grand cathedral tower.
Soft April blooming scatters winter's power
And leaves no trace, save where his icy breath,
Planted in tender trees, the seeds of death."

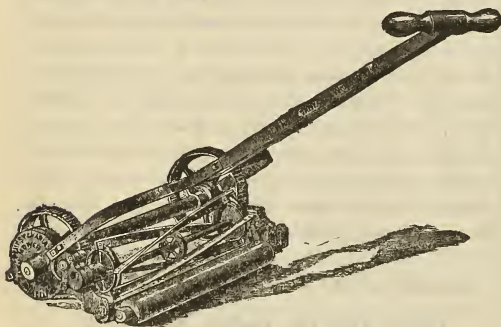
April smiling and weeping, comes with the feathered songsters in her train. We should meet her with flowers and a garden of plants, and have

all its appointments in proper order, giving promise of a continuous succession of beauty and bloom. Lord Bacon, elegantly wrote years ago that "God Almighty first planted a garden, and indeed it is the purest of all human pleasures. It is the greatest refreshment to the spirits of man, without which buildings and palaces are but gross handiworks, and man shall ever see that when ages grow to civility and elegance, men come to build stately sooner than to garden finely, as if gardening were the greater perfection."

By all means let every one have a flower garden, of greater or lesser size. It gives life and attraction to any country place, and is an indispensable joy to every body, in the country in summer.

Now is the time each good "huswife" should be attentive to the henner, apiary, dove-cote and the dairy—to the latter we look for plenty of rich milk which makes fruits so enjoyable, and for butter that the bread and vegetables may be made an enticing substitute for the heavy meat diet which is not wholesome in hot weather.

There is no feature about the grounds more useful and pleasurable to the eye than a well-set, green, close-shaved lawn. Nothing tends to obtaining this so fully and speedily as frequent use of a Lawn Mower. I give a picture of the latest improved Mower, and I believe is considered the best in the market.



THE PENNSYLVANIA LAWN MOWER.

The Messrs. E. Whitman, Sons & Co., have them of different sizes, for sale from \$14 to \$24 each. The lowest priced one can be worked by a child, and is as healthy an exercise as trolling a hoop or riding on a Bicycle.

I enjoyed not long since, a new bread, called SWEET POTATO ROLLS, so much, that I begged the recipe from the lady, Mrs. G. S. C., which I give you now :

"To 1½ pounds cooked sweet potatoes, add 1 large tablespoonful of lard; one slight tablespoonful of salt; 4½ pounds of flour; 1 gill of yeast; 1 quart of luke warm water. Mix the potatoes, lard,

and salt together while warm, then add 1½ pounds flour, gill of yeast, and the water. Set to rise in a warm place for three or four hours, then knead in the remaining flour slowly, so as to make a soft, smooth dough; then set to rise again for a couple of hours; then slightly work them for the pans, allowing a little while to rise in the pans. Bake three quarters of an hour in a moderately quick oven, if very light, if not, one hour.

"This is also an excellent recipe for light bread, substituting about half the quantity of Irish potatoes for the sweet, and a little more flour."

Publications Received.

Part 8, of "Illustrated Book of the Dog," from Cassell, Petter, Galpin & Co., N. Y. This part is illustrated with a colored engraving of a mastiff drawn from life. Every lover of the dog should have a copy of this splendid work.

"Farming for Profit" is an encyclopedic volume of 850 pages, well illustrated and printed, and bound in the highest style of agricultural books, just received from the publishers, J. C. McCurdy & Co., Philadelphia. It has a large fund of useful information. The chapter on farm and fodder crops is a very valuable one for new beginners and instructive to old farmers. The chapters on fertilizers and on implements are defective in saying that there is only one company which makes a special manure for sugar cane and cotton; while there are several firms in Baltimore which sell thousands of tons of fertilizers specially prepared for cotton and other crops. Many new improvements in machinery and utensils have also been overlooked by the author; but no work of the kind, embracing the whole field of agriculture can be perfect. We, on the whole, recommend it as a valuable addition to every farmer's library.

From Professor A. R. LeDoux, the Annual Report of the North Carolina Agricultural Experimental Station, for 1879.

From U. S. Department of Agriculture, a special and valuable report upon the Numbers and Prices of Farm Animals.

From the author, Mr. Geo. Haskell, Ipswich, Mas., a pamphlet on Grapes, and a description of forty varieties, obtained by Hybridization.

"All about the Plum Curculio," by Prof. J. P. Stelle, Mobile, Ala. The author claims to give instructions by which all the stone-fruits can be grown entirely clear of worms. He generously offers to send this little work free to all who send him a stamp to pay return postage.

"Annali de Statistica," series 2nd, vol. 10, from Rome Italy, published by the Minister of Agriculture, Industry and Commerce of the Italian Government.

"Tobacco from the Seed to the Salesroom."—An exhaustive treatise upon the culture and curing of this plant, by that eminent planter, Robert L. Ragland, of Va.

Journalistic.

"Breeder's Live Stock Journal," is the title of a new monthly in quarto form, 16 pages, price \$1 per year, published at Beecher, Ill., by the Breeder's Live Stock Association. The first number is just received, and seems to be edited with great ability and care. We heartily commend it to our readers and to the support especially of stock breeders throughout the country.

"Golden Days," is an admirable paper for boys and girls. We commend it highly to parents and others who wish to put a proper paper in the hands of the little people. Filled as it is, with wholesome reading in the most attractive form, it becomes a good antidote to those papers cheaply gotten up, which tend to corrupt rather than give entertaining instruction to children. This paper is in large folio form, 16 pages, weekly, and elegantly illustrated, published by James Elverson, Philadelphia, \$3 per year. We heartily commend it to our young friends.

"The Farm," has always been a favorite among our foreign exchanges. We are glad to see that its success has enabled it to remove to more commodious quarters,—87 Marlboro' Street, Dublin—enlarge its size, and secure the services of Thos. B. Grant, Esq., as editor. Mr. G. was for many years co-editor of the "Irish Farmer's Gazette." The relations between this country and the British Isles, render it almost a necessity that our farmers should know more of each other in regard to agriculture.

We have received the "Technologist," of France, from the publishers, in Paris. It is a valuable journal now in its 42nd year. The present number contains some very interesting and useful papers on various subjects. We had translated some important paragraphs about Oleomargarine and Phylloxera, for this number, but want of room will compel us to defer their publication until our May number.

Catalogues Received.

From C. E. Allen, Brattleboro, Vermont, his Catalogue of Seeds and Plants, for 1880, handsomely illustrated, with the addition of ten pages descriptive of floral novelties for this spring.

Buist's Almanac and Garden Manual, a valuable hand-book for every one who has a floral and vegetable garden, Philadelphia.

From John Saul, Washington, D. C., Catalogue of New, Rare and Beautiful Plants.

From Ellwanger & Barry, Rochester N. Y. their illustrated and descriptive Catalogue of Ornamen-

tal Trees and Plants, among which some new varieties, and a great many very desirable plants for ornamentation of grounds.

From Mr. Purdy, Palmira, N. Y., Catalogue of Purdy's Fruit, Farm and Nurseries.

From Mr. A. Breckenridge, Govanstown, Balto Co., Md., his Flower and Fruit Catalogue. This is an old and respectable Nursery, and although the Catalogue is not quite "gilt-edge," and filled with fancy colored engravings, yet the plants are no doubt first-class, and that is better than all the beauty on paper.

Pigeons.

PIGEONS.—No one can visit a poultry show without being struck with the great numbers and variety of pigeons. It is not unusual to find hundreds of them on exhibition, and a score of varieties. These have not been favorite birds with farmers, as they regard them inclined to pull up corn and scatter their excrement about the barn. As for their reputation for mischief, they are in this respect like other birds, charged with the damage done, but not credited for the good they do. Pigeons are great scavengers, devouring multitudes of insects, and among others the canker worms, which do so much damage to apple trees. Judging from my own experience, which has not been limited, they do four-fold more good than mischief. As for their dirtying the premises, this is the fault of the farmer. Furnish them a convenient dove cote, and keep tight barns, and the excrement will be found where it can be put to good use as a fertilizer. Squabs are becoming a favorite dish with the wealthy people, who are willing to pay a high price for them, and farmers should see to it that the market is supplied with such food as is in demand and pays well. It is a pleasant feature of a farm house to see doves flying around it. They give animation to a scene which otherwise might be a little lifeless, and as they pick up their own living mainly, and are very prolific, a good dish for home and for market can be cheaply furnished.—A. H. in *Country Gentleman*.

OUR THANKS to those who so promptly responded to our enquiry for back numbers of 1869, and we must say that we were greatly and pleasantly surprised at the large numbers of replies to our enquiry, from Maine to Florida, offering us the numbers of 1869, many of them stating that they had preserved every number for the past 16 years, which, as they stated, showed their appreciation of the MARYLAND FARMER.

New Advertisers.

J. B. L. Wagner, Prop'r of Green House.
 John S. Reese & Co., Pacific Guano.
 C. R. Hogan, Maltby House.
 John Schrer & Son, Lumber Merchants,
 Minard Harder, Thrashers, etc.
 S. Pennock & Sons, Road Machines.
 American Fruit Drier Co., Fruit Evaporators.
 C. Aultman & Co., Steam Engines.
 Marion K. Smith, Eggs and Poultry.
 E. D. Darlington, Nurseryman.
 Chichester Rifle Co., Repeating Rifles, etc.
 J. B. Russell, Guano, etc.
 Jno. C. Bonnell, Lands for sale.
 R. H. Haines, Fruit Growers Friend.
 John Duer & Sons, Slate and Marble Mantels.
 G. Demuth, Organs, etc.
 Jno. H. Hitchens, Fancy Goods and Toys.
 Lissauer & Co., Jewelers.
 Clark & Sneider, Breech-Loading Guns.
 Geo. M. Roberts & Co., Commission Merchants.
 R. H. Milliken, London Yoke Shirts.
 Wm. Eckhardt, Picture Frames.
 A. P. Bayley & Co., China and Glassware.
 E. G. Hipsky, Groceries, etc.
 Andrew Ford, 99 ct. Store.
 Mrs. J. Baer, Millinery Goods.
 Chas. E. Bristol, Hardware.
 Wm. J. Beach, Oysters, etc.
 Jas. Webb & Co., Fertilizers, etc.
 Jacob Myers, Wall Papers.
 Augustus C. Medinger, Groceries.

Notice of Advertisements.

The Improved Rifle offered for sale by the Chichester Rifle Co., of Jersey City, N. J., at the low price of \$6.50, is without doubt the best bargain in Fire-arms ever presented to the public. They are handsomely made and cannot fail to give satisfaction, being very accurate for either sporting or target purposes. Any of our readers requiring a reliable gun cannot do better than secure a Chichester.

"The Fruit Growers Friend," by R. H. Haines is a valuable compendium of useful information for all who desire to grow fruits. To be had at this office on receipt of 30 cents. It is a closely printed and neat pamphlet of 38 octavo pages.

We call attention to the advertisement, and a notice elsewhere in this number, of the "Pennsylvania Lawn Mower."

The "Green House," the *ne plus ultra* of Baltimore Restaurants, kept by the Bros. Wagner, is daily thronged by citizens and transient visitors who wish to enjoy the earliest delicacies of the season served in the highest style of cuisine.

Our readers who suffer from deafness should read advertisement of the Gamore Ear Drum Co., Cincinnati, which appears in another column.

Minard Harder, of Cobleskill, N. J., advertises his renowned Railway Thrashers and Cleaners. This is an old and well established house.

S. Pennock & Sons, Kenneth Square, Pa., Road Machines. See our Editorial on Road Machinery.

C. Aultman & Co. advertise their Improved Sweepstake Thrasher and the Canton Monitor Engine. It would be well for persons before buying elsewhere to examine these implements at No. 12 S. Eutaw Street.

John S. Reese & Co. advertise that well known fertilizer, Pacific Guano. This firm is an old one and perfectly reliable.

J. S. Lewis, Shoe House on Fayette Street near South Street, Baltimore, has a large and handsome establishment where good shoes can be bought reasonably, as we can vouch from some recent dealings with it.

The "Maltby House" has, under the management of Col. Hogan, been a success, but at no time so popular as now, when the greatest comfort and the choicest bills of fare are furnished guests at the lowest rates by the accomplished host.

NOTICE.

In our March number we mentioned that we could not furnish any more specimen copies for January or February numbers, 1880. We regret now to say that we cannot any longer furnish these numbers to regular subscribers, as the large increase in our subscription the past 30 days has entirely exhausted the January and February numbers, and hereafter new subscribers cannot date back after March. The MARYLAND FARMER now circulates in nearly every State and Territory in the United States, and is rapidly increasing.

BALTIMORE MARKETS—APRIL 1.

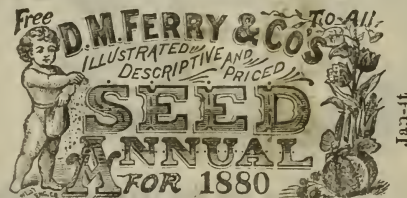
This Market Report is carefully made up every month, and farmers may rely upon its correctness.

Apples, New York, per bbl.	1 50	a2 00
do. country do.		
Bark—The market steady and unchanged, No. 1		
\$25; No. 2 at \$12a20 per ton.		
Beans—Medium to choice.	1 65a1 75	
Beeswax—Prices steady at.	0 24	
Broom Corn—Medium to choice.	0 08a0 08	
Butter—For table use.	0 38a0 85	
Cooking and bakery.	0 10a0 14	
Cheese—N. Y. State.	0 13a0 15	
Western	12a14	
Cotton.—Demand is good.	12 3/4a12 3/4	
Eggs—Different localities.	14a16	
Fertilizers—Jobbing rates are here quoted. Contracts for large orders can be made at reduced figures. 2,000 lbs. to the ton.		
Peruvian Guano.	\$50 00a50 00	
Turner's Excelsior.	50 00	
do Ammonia Sup. Phos.	40 00	
Soluble Pacific Guano.	45 00	
Ra- in's & Co.'s Sol. S. Is. Guano.	50 00	
Excellenza Soluble Phosphate.	50 00	
do Cotton Fertilizer.	50 00	
Holloway's Excelsior.	46 00	
Holloway's Phosphate.	40 00	
Whitman's Phosphate.	45 00	
Plaster.	per bbl. 1 75	
Orchilla Guan A. per ton.	30 00	
South Sea Guano.	50 00	
Singluff & Co's Dissolved Raw Bone.	45 00	
Singluff & Co's Dissolved Bone Ash.	40 00a42 00	
Whitman's Potato Phosphate.	45 00	
Dissolved Missouri Bone.	45 00	
Bone Ash.	40 00	
Feathers—Live Geese.	0 40a45	
Grain—Corn.	0 55a0 60	
Oats.	0 10a0 45	
Rye.	0 50a0 91	
Wheat.	1 4a1 48	
Potatoes—		
Early Rose, per bbl.	2 50a2 75	
Peerless, per bbl.	2 25a2 75	
Pearl Blw, per bbl.	2 25a2 50	
Sweet Potatoes per bbl.	2 50a3 00	
Live Stock—Beef Cattle.	4 45a5	
Hogs, fat.	4 45a6	
Sheep.	3 45a4 1/4	
Seeds—		
Clover Alsike.	3 15a60c	
do Lucerne best.	50c	
do Red, Choice.	9c	
do White.	40c	
Flaxseed.	3 bush. 1a10	
Grass Red Top.	3 bush. 1.25a1.50	
do Orchard.	2.25a	
do Italian Rye.	3.50	
do Hungarian.		
do German Millet, per bus.		
do Ordinary.		
do Timothy 45 lb.	2.75	
do Kentucky Blue.	1.50a2.0	
Tobacco—LEAF—		
Maryland—Frosted.	\$1 50a2 00	
do. sound common.	2 50a3 00	
do. good do.	3 50a5 00	
do. middling do.	6 00a7 00	
do. good to fine red.	8 00a10 00	
do. fancy.	10 00a15 00	
Virginia—common and good lugs.	8 50a10 00	
do. common to medium leaf.	10 00a13 00	
do. fair to good.	13 00a16 00	

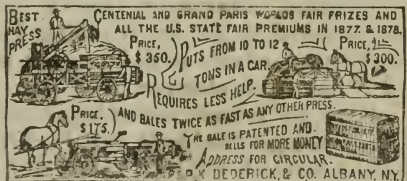


My Annual Catalogue of Vegetable and Flower Seeds for 1880, rich in engravings from photographs of the originals, will be sent FREE to all who apply. My old customers need not write for it. I offer one of the largest collections of vegetable seed ever sent out by any seed house in America, a large portion of which were grown on my six seed farms. Full directions for cultivation on each package. All seed warranted to be both fresh and true to name; so far, that should it prove otherwise, I will refill the order gratis. The original introducer of the Hubbard Squash, Pinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other vegetables, I invite the patronage of all who are anxious to have their seed directly from the grower, fresh, true, and of the very best strain. New Vegetables a specialty. Dec5m

JAMES J. H. GREGORY, Marblehead, Mass.



Will be mailed FREE to all applicants, and to customers without ordering it. It contains four colored plates, 600 engravings, about 200 pages, and full descriptions, prices and directions for planting 1500 varieties of Vegetable and Flower Seeds, Plants, Roses, etc. Invaluable to all. Send for it. Address, D. M. FERRY & CO., Detroit, Mich.



ACENTS READ THIS

We will Pay Agents a Salary of \$100 per month and expenses, or a large Commission, to sell our new and wonderful invention. WE MEAN WHAT WE SAY. Sample free. Address SHERMAN & CO., Marshall, Mich. Nov6t.

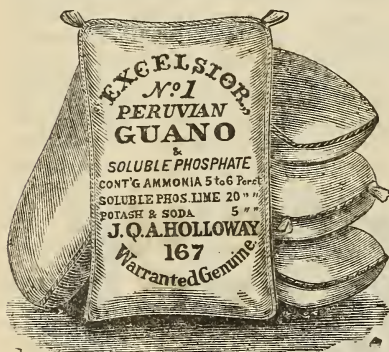
STANDARD SIGN WRITER, and Letterers' Companion, a practical book for practical men. Explicit instructions and model alphabets. \$2 00 booksellers and painter's supply houses, or by mail, JESSE HANEY & Co., 119 Nassau St. N. Y.—Sep

TO TOBACCO PLANTERS

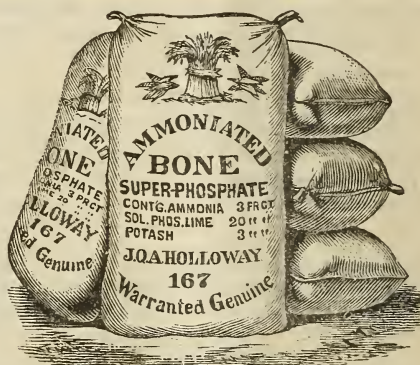
The undersigned PIONEER, in the manufacture of Fertilizers in this city and Originator in 1858 of the formulas and processes of manufacture of

“Excelsior” and “Ammoniated Phosphate”

so well and favorably known by the Agricultural public, relying upon his experience and personal reputation hitherto acquired in the uniform excellence of these Fertilizers AS MANUFACTURED BY HIM, continues to offer them to the Farmers and Planters of Maryland and Virginia, with the assurance that the high standard quality of each will be maintained as heretofore.



—AND—



The above are the most concentrated FERTILIZERS ever offered to the Farmer—combining all the stimulating qualities of Peruvian Guano, and the ever-durable fertilizing properties of Bones, in fine, dry powder, prepared expressly for drilling, and it is the universal opinion of the Planters of Maryland and Virginia, after over twenty years experience in the use of the *Excelsior* manufactured by me, in Growing Tobacco, that an application of 100 pounds is equal in its effects to 200 pounds of any other Fertilizer or Guano, therefore fully 50 per cent. cheaper.

With my present advantages and superior facilities for Manufacturing, I challenge competition with any Fertilizer sold in the United States in QUALITY, MECHANICAL CONDITION and PRICE.

By strictly adhering to my *Original Formulas*, using only the most concentrated materials, and *superintending in person their manufacture*—as for the past twenty years,

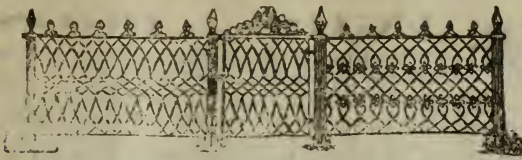
UNIFORM QUALITY IS GUARANTEED.

Farmers to secure the ONLY GENUINE EXCELSIOR and PHOSPHATE, prepared according to my *original Formulas* established in 1858, should see that every Bag is branded as above, with the ANALYSIS and MY NAME IN RED LETTERS.

J. Q. A. HOLLOWAY,

Originator and Manufacturer,

107 McElderry's Wharf, Baltimore, Md



WIRE RAILING

AND

ORNAMENTAL WIRE WORKS

DUFUR & CO.

No. 36 N. Howard Street, Baltimore, Md.

MANUFACTURE

Wire Railing for Cemeteries, Balconies, &c.

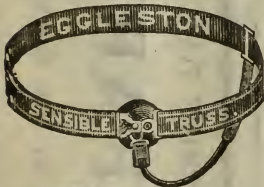
SEIVES, FENDERS, CAGES, SAND and COAL SCREENS, WOVEN WIRE, &c.

Sep-1y.

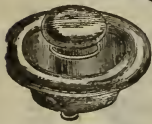
ALSO, IRON BEDSTEAD, CHAIRS, SETTEES, &c., &c.

THIS NEW

ELASTIC TRUSS



Has a Pad differing from all others, is cup-shaped, with SELF-ADJUST'NG BALL in the center, adapts itself to all



AN ENLARGED VIEW OF THE PAD.

positions of the body, while the BALL in the Cup PRESSES BACK THE INTESTINES JUST AS A PERSON WOULD WITH THE FINGER. With light

pressure the Hernia is held securely day and night, and a radical cure is certain. It is easy, durable and cheap. Sent by mail, postage paid. Circulars free.

Address, Eggleston Truss Co., Manfrs.
Or C. H. EGGLESTON CO., Chicago, Ill.

July 1-y

\$777 A YEAR and expenses to Agents, Outfits Free. Address P. O. VICKORY, May-1y Augusta, Maine.

High Class Poultry

Eggs from 10 carefully selected Brown Leghorns, 8 fine Dark Brahmas and choice Light Brahmas, from J. E. Loyd's 1st premium stock, finest in the State, and also a few settings from a hen of 1st premium stock White Leghorn, at \$1.50 per 13. Eggs from Imperial Pekin Ducks 1st premium birds, \$2 per 13 eggs; packed to hatch, and delivered at express free.

A. W. FRIZZLE,

232 Pennsylvania Ave., Balto., Md

P. S.—All bred in the county. Mch-1f



sent by Dr. B. J. Kendall & Co., Enosburg Falls, Vermont.

This remarkable medicine will cure Spavins, Splint, Curb, Callos, &c., or any enlargement, and will remove the bunch without blistering or causing a sore. No remedy ever discovered equals it for certainty of action in stopping the lameness and removing the bunch. Price \$1.00. Send for illustrated circular giving positive proof, and your nearest agent's address. Kendall's Spavin Cure is sold by Druggists, or

THOMPSON & MUTH,

16 German Street, Baltimore, Md.

TAKE THE Gardener's Monthly AND HORTICULTURIST,

Edited by THOMAS MEEHAN,

For the Amateur Cultivator, Botanist, Naturalist, Lover of the Country, Florist, Pomologist, Arboriculturist, Nurseryman, Seedsman, Dealer, Landscape Gardener, Fruit Grower, &c.

SUBSCRIPTION.—\$2.10 per year, \$1.05 for six months, 70 cents for four months, 53 cents for three months. \$3.20 for two names or one old and one new. Five subscribers for \$7.00. Sample copies, 12 cents. Address,

CHARLES H. MAROT, 814 Chestnut St.,

Feb-3t

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THE LARGEST, OLDEST AND BEST.
FIFTY-TWO PAGES—MONTHLY.

AMERICAN BEE JOURNAL

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Apr-1t

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Water,	0.20	20.78	20.54
Carbonate of Lime,	1.43	0.72	1.87
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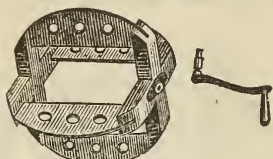
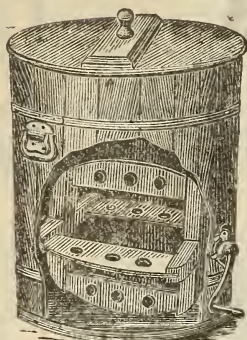
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MUNSON & CO., 115 Nassau St., New York.

Jan-ly eom



BALTIMORE & OHIO RAILROAD;
THE GREAT DOUBLE TRACK
NATIONAL ROUTE AND SHORT LINE

TO THE

NORTHWEST, WEST AND SOUTH

To take effect

SUNDAY, Nov. 24, 1878, at 4.20 A. M.

A. M. Leave Camden Station,

- 4.20 Washington and way stations.
5.20 †WASHINGTON EX. VA. MIDLAND,
LYNCHBURG, DANVILLE, South &
Southwest. RICHMOND, via Quantico.
6.30 Ellicott City and way stations.
6.45 Washington and way stations.
7.10 *St. LOUIS, CINCINNATI, CHICAGO,
COLUMBUS PITTSBURG AND WASHING-
TON EXPRESS (Annapolis and Valley
Branch except Sunday).
8.00 †Piedmont, Strasburg, Winchester, Hager-
stown, Frederick and way, via. Main
Stem. (On Sunday to Ellicott City
only)
9.00 †Washington, and Way stations. (On
Sunday connects for Annapolis.)
10.30 WASHINGTON EXPRESS.
P. M.
12.15 Washington, Annapolis and way sta-
tions.
1.30 On Sunday only for Washington and
Richmond, via Quantico.
1.30 Ellicott City and way stations.
3.05 Washington and way stations.
4.00 WASHINGTON EX. RICHMOND, via Quan-
tico
4.20 Winchester, Hagerstown, Frederick and
way.
5.00 †Washington, Annapolis and way
5.20 †Frederick and way Stations.
6.15 †CHICAGO, COLUMBUS AND WASH. Ex.
6.25 †Martinsburg and way stations.
6.30 †Washington and way stations.
8.30 †St. LOUIS, CINCINNATI, PITTSBURG
AND WASHINGTON EXPRESS. (No con-
nection for Pittsburg on Sunday.)
9.00 On Sunday only, for Mt Airy & Way
11.15 Mt. Airy and way stations.
For Metropolitan Branch—†7.10 A. M., 1.30
(8.05 P. M. and 6.15 P. M. (†8.15 P. M. Rock-
ville only.)

All trains stop at Relay.

Leave Washington for Baltimore.

5.05, 6.50, †7.40, 8.30, †9.00 †10.00 A.M. †12.10;
†1.30 1.35, †4.30, †4.40, †5.30, †6.50, †8.10 †101
P. M.

†Daily. †Sunday only. Other trains daily
except Sunday

L. M. COLE, W. M. CLEMENTS,
Feb-15 G'l Ticket Agent. M. of T.

HORSE BOOK Send 25 cents in Stamps or cur-
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It treats all diseases, has 35 fine engravings, showing
position assumed by sick horses, a table of doses,
a large collection of VALUABLE
RECEIPTS, and a large amount
of other valuable horse information. Dr. Wm. H. Hall,
says "I have bought books that I paid \$5 and \$10, for
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This RESTAURANT is the oldest and most ex-
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The BAR is filled with the finest of all kinds of
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substantial food the markets afford, besides, at the
earliest moment they can be procured in the differ-
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water furnish, in

BIRDS, GAME, FISH, FRUITS & VEGETABLES.

Prices moderate. The crowds, which lunch and
dine daily, attest public approbation of the superior
management of the house.

It is a convenient place for travellers, who stop
only a few hours or a day in the city, to get their
meals. It is the popular resort of country gentle-
men from the counties, particularly from Southern
Maryland, being convenient to Railroads and Steam-
boats, and in the midst of the business portion of
the city.

The Proprietors will be grateful for the continu-
ance of the extensive patronage they now enjoy, and
will do their best to give entire satisfaction to all
visitors. jan-ly.

COL. W. W. W. BOWIE will fill
promptly, all CASH Orders for Stock, Poultry
Fertilizers &c., enquiries about Improved Stock,
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willing to perform in the interest of the "Farmer"
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Perfumed Chromo, 25c. Cards, name on, 10c. 42 Mixed Cards and Oct 15
50c Pocket Knife, 25c. Autograph Album, 25c. Game Albums,
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COAL.
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Especial attention given to this Coal
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ESTABLISHED 1818.

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FERTILIZING SALTS,

With which any farmer can make
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CHEMICALS

And other materials for making

HOME FERTILIZERS.

Muriate Potash, Kalnit,
 Sulphate Soda, Plaster,
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 Dissolved South Carolina,
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A full supply of PURE Materials always on
 hand and for sale at lowest market prices.

Formulas for home manipulation, estimates
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Pure Slaughter House

BONE-DUST

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DISSOLVED BONE,

GUARANTEED THE

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AMMONIATED

Raw Bone Superphosphate

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SUPERPHOSPHATE

FOR ALL CROPS.

SEND FOR CIRCULAR.

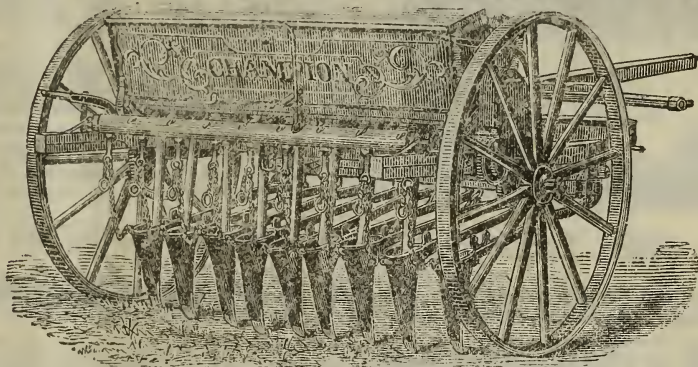
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With Fertilizer and Grass Seed Attachments.
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ITS POINTS OF SUPERIORITY:

It is the lightest Draught Drill in the market.

It has the best grain distributor ever invented.

It has the only Fertilizer Attachment that always gives Satisfaction and that will sow sticky Phosphates.

It has less cog wheels and machinery and is Simpler than any other Drill.

It gives less trouble to the Operator than any other drill.

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Don't Fail to See it before Purchasing any other.

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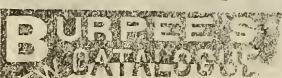
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It is the only Hotel in Baltimore of the new style, embracing

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And all conveniences; perfect ventilation and light throughout, and was planned and built as a Hotel, new from its foundation.

Its elegant and convenient Office and Exchange Room, with Telegraph, &c., will at all times be at the disposal of the merchants and citizens of the city.

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
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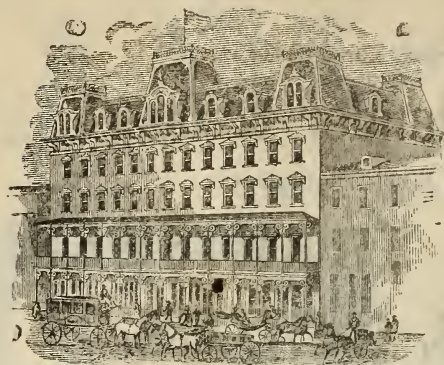
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Owing to the decline in the cost of many articles appertaining to our expenses, the rates of board will be reduced after March 10th, 1877, to

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Being the only Hotel in the country at the above rates, possessing all the modern improvements, including **FIRST-CLASS PASSENGER ELEVATOR**, which will be in constant operation, making all parts of the house desirable and easy of access.

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A Large Assortment of Dry Lumber, suitable for

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The cheapest, best and most complete in the market. Free from the inconveniences and imperfections of most others. They produce butter quickly; easily cleaned and opened to the sun and air. We also manufacture Barrel and Staff Churns, and all other descriptions of Cedar Ware and Tanks.

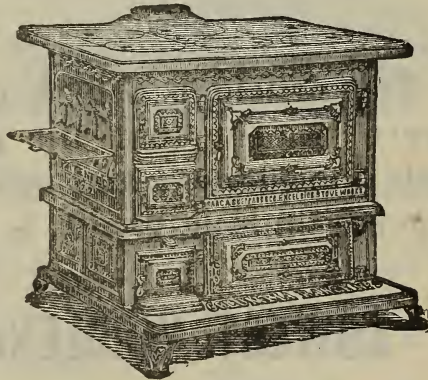
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A High Grade Phosphate!

Sold direct to Farmers at Lowest Wholesale

Cash Prices.

Price 1 to 3	Tons,	\$32.00	per	2,000	Lbs.
" 3 to 6	"	31.00	per	"	Lbs.
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Delivered on board Cars or Boat in Baltimore.

No Agents,

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This article is a high grade Phosphate, better in every respect than the great majority of \$40 to \$50 Phosphates; and instead of being sold through Agents on long credit, is sold direct to the Farmer

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LOWEST WHOLESALE CASH PRICE.

 Send for a Circular and read the opinions of those who have tried it.

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Whitman Phosphate, Missouri Bone Meal, & Fertilizer Materials.



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(commencing MONDAY, December 1, 1879.)

Leave Hillen Station daily (except Sunday) for Williamsport, Hagerstown and Emmittsburg 8.00 A. M., 1.15 P. M. For Gettysburg, Hanover, and points on H. J. and G. R. R. (through cars) 8.00 A. M. and 1.15 P. M. For Frederick (through car) 1.15 P. M.

For Union Bridge 8.00 A. M., 4.15, and 6.10 P. M. Reisterstown 10.50 A. M.

Trains arrive at Hillen Station at 8.20 and 10.00 A. M., and 1.40 and 6.20 P. M.

On Sunday—Leave Hillen Station for Union Bridge 9 A. M. 2.40 P. M. Arrive at Hillen Station 8.50 A. M. 6.20 P. M.

Trains stop at Intermediate Stations; also Charles Street, Pen. A. Ave. and Fulton.

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B. H. GRISWOLD, General Ticket Agent.

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SAILING SEMI-WEEKLY BETWEEN,

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Bronze Turkeys from prize winning strains.

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Leaves Union Dock at 6 P. M.; Canton Wharf, foot of Chesapeake street at 7.30 P. M.; connects closely on fast schedule for Wilmington, Raleigh, Charleston, Savannah, Augusta, Atlanta, Florida, and all points South to New Orleans; also for Petersburg, Lynchburg, Knoxville, Chattanooga, Memphis, and intermediate points.

Mondays, Wednesdays and Fridays for Matheys and Yorktown; Tuesdays, Thursdays and Saturdays for Cherrystone, Edenton and Plymouth (on Saturdays lay over at Norfolk); daily with James River boats.

Canton cars of Madison Avenue Line run every 15 minutes to corner of Elliott and Chesapeake streets, one square from steamer.

For tickets and information, apply at Company's Office, 157 W. BALTIMORE STREET, or on board of Steamers, W. M. LAWSON, Agent.

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Feb-11



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From BALTIMORE to all POINTS SOUTH

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Time QUICK and LOW RATES Guaranteed

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Feb-11

R. FOSTER, General Manager;

REMINGTON AGRICULTURAL IMPLEMENTS.

Steel, Carbon & Iron **PLOWS.**

Improved **MOWERS** and **HORSE RAKES,**

HORSE HOES, SHOVEL PLOWS,

CULTIVATORS,

SOLID STEEL

Shovels, Scoops, Spades,

Hoes, Forks, Rakes,

&c, &c.



—No. 25—
Patent Carbon
IRON BEAM

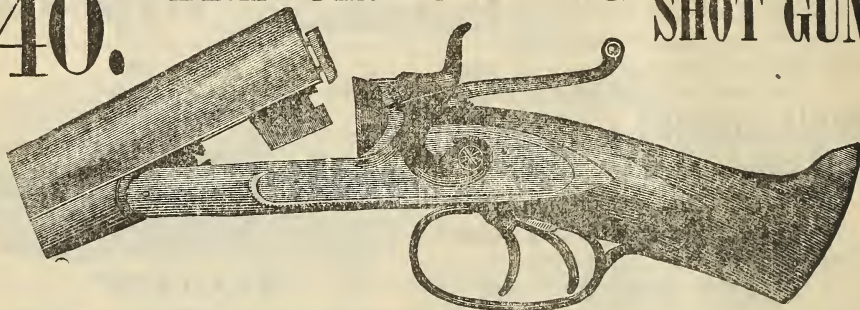
“**CARBON METAL.**”—A practical mixture of Refined Steel, Wrought Iron and other metals cast in form, **HARDER** than Steel or any surface-chilled Iron (the chilled iron being subject to soft spots). By our method the metal is uniform all through, every cast being alike; or, by change of compound can temper to any desired hardness for other purposes, combining strength, great wear and durability; subject to fine polish, it will scour in any soil. Costs less than Steel, and a trifle more than Cast Iron, but far superior and cheaper.

REMINGTON'S IMPROVED

BREECH-LOADING

SHOT GUN.

\$40.



Rebounding Locks.

THE BEST GUN MADE.

Warranted in every respect.

Fine English Twist and Damascus Guns from \$45 to \$95. Also Remington Rifles &c.

The Latest Triumph.

THE NEW REMINGTON

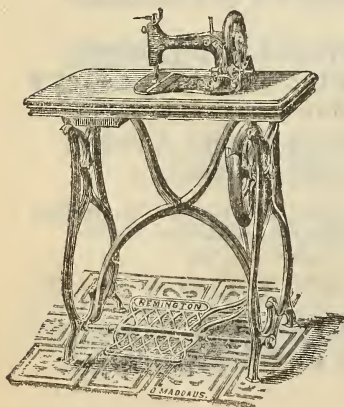
Sewing Machine.

LARGE ARM, SIMPLE, NOISELESS.

SELF

SETTING NEEDLE,
THREADING SHUTTLE,
WINDING BOBBIN,

Elegant in finish, and in fact the only Perfect Machine Made.



A. & A. G. ALFORD,
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SLIFER, MERRYMAN & CO.

GENERAL AGENTS

Marsh No. 4 Combined Reaper and Mower,

Bates Harvester,

New Complete Corn Drill,

New Mower,

Lion Hay Rake,

Standard Rake,

Ohio Chilled Plow,

Baldwin Fodder Cutter.

DEALERS IN

FIELD AND GARDEN SEEDS,

And a Full Line of

Agricultural Implements,

Send for Catalogue and Price List.

Agents Wanted. **85 S. CHARLES STREET,**

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STIEFF

Grand, Square and Upright PIANOS!

HIGHEST HONORS

Over all Americam and many European rivals at the

EXPOSITION, PARIS, 1878.


THE STIEFF PIANO

Combines in a wonderful degree the essential qualities of a perfect instrument, namely:

BRILLIANCY,
SWEETNESS,
EVENNESS OF TONE
FAULTLESS ACTION,
EASY TOUCH,
ARTISTIC FINISH,
EXTREME DURABILITY.

Every Piano is a Work of Art.

PERFECT IN DESIGN,
PERFECT IN WORKMANSHIP,
ELEGANT IN APPEARANCE

A large assortment of Second-hand Pianos always on hand. General Agent for Burdett, Clough & Warren, Peloubet, Pelton & Co., New England, and Taylor & Farley Organs. Pianos and Organs sold on monthly installments.  Send for Illustrated piano or organ catalogue.

CHAS. M. STIEFF,

No. 9 NORTH LIBERTY STREET,

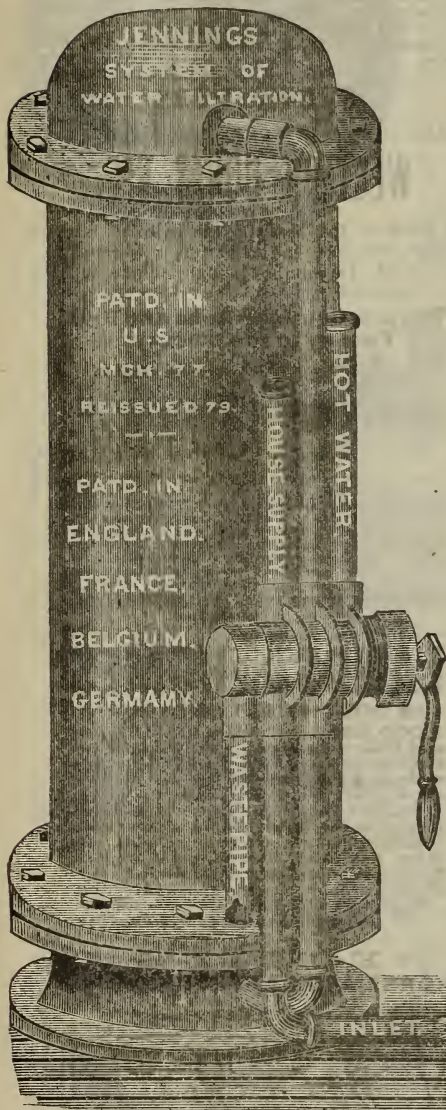
Aug—ly

BALTIMORE, MD.

Jennings' System of Water Filtration.

ESTABLISHED IN NEW YORK CITY IN 1876.

AND IN BALTIMORE IN 1879.



This machine placed in a house and connected with the inlet pipe from the street filters and purifies all the water entering the house without impeding its volume or force. Entirely unlike any other apparatus ever made and THE ONLY SUCCESSFUL SYSTEM of filtering water under pressure IN THE WORLD. Has had four years test under every variety of circumstances in New York City, and is now in successful operation in dozens of places in Baltimore, in public buildings, schools, laundries, factories, mills and private dwellings. The system is invaluable for filtering feed water for STEAM BOILERS, saving a large percentage of fuel by prevention of incrustation, giving dryer and CLEANER steam and more than doubling the life of the boilers.

Description of the Machine.

The cylinder of the filter is of cast iron, about 4 feet 6 inches long, and 18 inches in diameter, and weighs some 700 pounds. This cylinder is filled with charcoal of suitable size and quality, to thoroughly filter and purify the water passing through it. Both ends of the cylinder are fitted with iron gratings covered with copper wire gauge, which arrests the coarser impurities in the water. To this cylinder is connected a six-way valve, and to the valve is connected the inlet pipe from the street, the supply pipe to the house, *hot water* connection with the kitchen (or steam boiler for cleansing purposes), and the waste pipe to the sewer. This valve is operated by a single lever. To cleanse the filter when it shows signs of becoming clogged, it is only necessary to give this lever a quarter-turn, which shuts the street water off from the filter, and allows a *reverse current of hot water* from the boiler to pass through the filter, washing all the impurities into the sewer.

The machine for domestic purposes is usually placed in the cellar, and can be set by any plumber without interfering with the existing conditions of the pipes of the house. The process of cleaning requires only three to five minutes, about once a week.

The apparatus can, if desired, be placed in the kitchen, or where a tank in the upper part of the house is supplied by wind mill or ram, the filter is placed under the tank. Once placed in a house, there is no reason why the apparatus should not last as long as any of the pipes in the house. There being nothing of a destructible nature used in its manufacture, the filtering material never requiring renewing or repacking.

SMALLER FILTERS ADAPTED TO ALL PURPOSES, AND VARYING IN PRICE FROM TWO DOLLARS AND UPWARDS ALWAYS ON HAND.

OFFICE 226 WEST BALTIMORE STREET.

R. S. JENNINGS, Manager.

Seply

A. G. MOTT,

Manufacturer and dealer in

Agricultural Implements,**Machines and Seeds,**

No. 40 ENSOR STREET,

June-ly

BALTIMORE, MD.

Some fifteen second-hand Buckeye and other first class Mowers for sale cheap; call and see them. Repairing implements a specialty.

1880

THE

GREAT IMMIGRATION YEAR!

Thousands are going West, and the majority

SETTLE IN NEBRASKA!

All Eastern Farmers when coming West are pleased with the

Berlington & Mo. River R. R. Lands.

17,000 Have Already Purchased, and there is yet For Sale by this Company Enough Land to make

10,000 EIGHTY-ACRE FARMS!

Send Postal Card for a CHART showing all the LANDS FOR SALE, January 1st, 1880.

Address GEN'L AG'T B. & M. R. R.

Apr-3t

OMAHA, NEB.

TO PARENTS AND GUARDIANS.

The Principal of a Select Academy on Catonsville Avenue, near Relay, on the Baltimore and Ohio Railroad, Maryland, will accommodate as boarders and scholars four or five little girls, who under her motherly care, will enjoy the advantages of a happy home, and an education in all those branches which make accomplished young ladies, in morals, learning and house-hold duties. Catonsville Avenue is one of the healthiest and most desirable places in Maryland.

Address "PRINCIPAL," St Denis P. O., Baltimore county, Maryland, or to Col. W. W. W. Bowie, Office of Maryland Farmer, Baltimore, Md. Fe3t

HOPE FOR THE DEAF**Garmore's Artificial Ear Drums**

PERFECTLY RESTORE THE HEARING and perform the work of the Natural Drum. Always in position, but invisible to others. All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular. **GARMORE EAR DRUM CO., CINCINNATI, O.**

Apr-1t

PLYMOUTH ROCKS

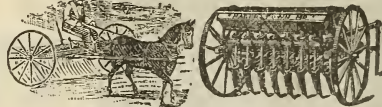
Have bred them five years exclusively, and can recommend them as a farmer's fowl in every respect. They are good layers, and the best of all fowls for market. My stock is first-class, and I will guarantee to suit all parties who may favor me with their patronage. Eggs, \$3.00 per 13, securely packed, and a fair hatch guaranteed. Fowls for sale at all seasons. **W. H. CUMMINGS, Milldale, Conn.** April-y

BEE-KEEPERS!

Send for a specimen copy of the

WESTERN HONEY BEE.

Also price of the Model Hive and Bee Keepers Supplies, sent free on application. Address Feb E. M. Harrison, Sebanon, Laclede, Co., Mo.

The only Southern Rake and Drill Factory in the Country.

These cuts represent our 20 Steel-Tooth Horse Rake, with Iron Hubs (or Locust Hubs boiled in oil)—9,000 in use—and our Positive Force-Feed Grain, Seed, and Fertilizing Drill (which can be changed to sow any quantity while Drill is in motion), with Pin or Spring Hoes—8,277 in use and giving satisfaction. All manufacturers say theirs are the best. All we ask is, send for *Descriptive Circular and Price-List*, which contains letters from persons using them. All are warranted. **HAGERSTOWN AGRICULTURAL IMPLEMENT MFG. CO.** Hagerstown, Maryland,

mar-8t

LANDS AND HOMES**IN SOUTHWEST MISSOURI.**

1,000,000 acres well-watered Timber and Prairie Lands along the line of the St. Louis and San Francisco R. R. for sale at from **\$2.50 to \$8.00** per acre on *seven years' time*. Excellent for Stock, Fruit, and Farming. The best Tobacco Region in the West. Short winters, convenient markets, superior schools, low taxes, healthful climate, good society. Free transportation from St. Louis to purchasers of land. Send for maps and circulars.

W. H. COFFIN, Land Commissioner,
Temple Building, St. Louis, Mo.

feb3t

FOUTZ'S HORSE AND CATTLE POWDERS

Will cure or prevent Disease. No HORSE will die of COLIC, BORS or LUNG FEVER, if Foutz's Powders are used in time. Foutz's Powders will cure and prevent HOG CHOLERA. Foutz's Powders will prevent GAPS in FOWLS. Foutz's Powders will increase the quantity of milk and cream twenty per cent., and make the butter firm and sweet.

Foutz's Powders will cure or prevent almost EVERY DISEASE to which Horses and Cattle are subject. **FOUTZ'S POWDERS WILL GIVE SATISFACTION.** Sold everywhere.

DAVID E. FOUTZ, Proprietor,
BALTIMORE, Md.

sep-1y

TO WHEAT GROWERS!

J. J. TURNER & CO.,

AMMONIATED

BONE SUPER PHOSPHATE,



Composed of the most concentrated materials, it is richer in Ammonia and Soluble Phosphates than any other Fertilizer sold, except our "Excelsior," and is made with the same care and supervision; uniform quality guaranteed; in excellent order for drilling.

Farmers should see that every Bag is branded with the analysis and our name in red letters, which we hope will prove sufficient protection against counterfeit articles. ALL FURTHER ABUSE OF OUR NAME BEING DISCLAIMERS FOR THE FUTURE.

J. J. TURNER & CO., No. 42 W. PRATT ST.
BALTIMORE, MD.

Feb 1y

Geo. F. Sloan & Bro.

LUMBER,

Shingles, Sash, Bricks, &c.

IN LOTS TO SUIT.

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MANUFACTURERS OF

Pure Oak Tanned Leather Belting,

LEATHER HOSE AND MACHINE CARD CLOTHING.

Supplies for Cotton, Woolen, Silk, and all Description of Factories; Paper, Flour and Saw Mills. Railroad and Machine Shops.

Our Belts are warranted to run straight, do as much work, and last as long as any other make in the country, provided they have the proper care. Rubber Belts, Rubber Packing, Fibrous Gaskets and Rubber Goods for all mechanical purposes. Machine Oil, Lace Leather and Machinery Supplies generally.

Sep-1y

FOR SALE!



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White, Blue and Black Fantails. Solid, Wing and Tail Turbits. Silver, Black, Yellow, White and Blue Owls. White, Red and Yellow Jacobins. Black and Yellow Trumpeters. Silver, Blue, Red and Blue Chequered Antwerps, and other varieties at low rates.

Address, MARYLAND FARMER.


Wall Papers.

Window Shades.

HENRY EWALT,

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Offers to the public the latest styles of WALL PAPERS, of all grades, at the lowest prices. WINDOW SHADES, of the latest styles, with or without Scollops, of the best qualities, at low prices. ROOMS PAPERED in a city or country at short notice. Prompt personal attention given to all orders.  Notice the place by the three story white front. Jy-ly

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THE CELEBRATED

CLOTHIERS,

OF BALTIMORE, MD.

Announce the introduction of a plan of ordering

CLOTHING AND UNDERWEAR BY LETTER,

To which they call your special attention. They will send on application their improved and accurate RULES FOR SELF-MEASUREMENT, and a full line of samples from their immense stock of

Cloths, Cassimeres, Coatings, Shirts, &c., &c.

A large and well-assorted stock of READY-MADE CLOTHING always on hand, together with a full line of FURNISHING GOODS

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Manufacturers and Dealers in Men's and Boys' Clothing and Furnishing Goods, either Ready-Made or Made to Order.

Nos. 165 & 167 W. BALTIMORE ST.,

dec-ly

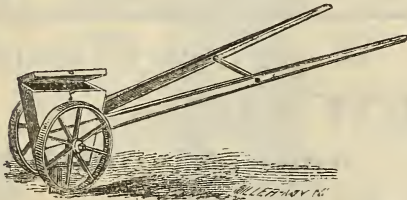
Baltimore, Md.



BERRIES.
QUEEN of the MARKET
 the largest and best.
 2,000,000 Sharpless Strawberries.
 1,000,000 Miner's Great Prolific.
 10 acres other choice varieties.
 2,625 bushels Berries grown at Pomona Nursery in 1879.
 A new race of Pears, Kieffer's Hybrid, Blight-Proof; hardy and productive, bears early, fruit large, and of good quality. \$2. Send for Catalogues free.
WM. PARRY,
 Cinnaminson, N. J.

feb 31

HALLOCK'S IMPROVED SEED DRILL.



This machine will sow in drills all kinds of seeds, from beet down to the smallest seeds, without regard to weight, shape or size, with regularity, and without failure as long as there is seed in the hopper, and is guaranteed to give satisfaction; and will do the work with one man, that would take a half-dozen men in a given time. It can be sent anywhere, by R. R. or Express, on receipt of the price, which is only \$5, and warranted to work as represented.

It is upon the principle of the old English hand seed drills, with the revolving brush used for many years in England. Address,

E. D. HALLOCK,

Feb-tf 55 S. Charles St., Baltimore, Md.

\$5 to \$20 per day at home. Samples worth \$5 free. Address Stinson & Co., Portland, Maine. Dec-1y.

AGENTS WANTED to Sell the NEW BOOK,

FARMING FOR PROFIT

TELLS HOW TO

Cultivate all the Farm Crops in the Best Manner; Breed, Feed and Care for Stock; Grow Fruit; Manage Farm Business; Make Happy Homes, and

How to Make Money on the Farm.

Every Farmer should have a copy. 860 Pages.

140 Illustrations. Send for circulars to

J. C. McCURDY & CO., Philadelphia, Pa.

mar 31

52 Gold, Crystal, Lace, Perfumed and Chromo Cards, name in Gold and Jet roc., Clinton Bros. Clintonville Ct. Oct.-1y

AGENTS READ THIS!

We will pay Agents a Salary of \$100 per month and expenses, or allow a large commission, to sell our new and wonderful inventions. We mean what we say. Sample free. Address, SHERMAN & CO., Marshall, Mich.

COOLEY CREAMER.

GOLD MEDAL, PARIS, 1879.



BUTTER made by this process, awarded **SWEETSTAKES** at International Dairy Fair, 1878, and **GOLD MEDAL** and **FIRST PREMIUM** at same Fair, 1879. **FIRST PREMIUM** at Royal Agricultural Exhibition, London, 1879.

It requires no milk-room.

It raises all of cream between milkings.

It affords better ventilation.

It requires less labor.

It is more thoroughly made.

It is cheaper, and gives better satisfaction than any other way of setting milk.

THE BUTTER MADE BY THIS SYSTEM IS UNEXCELLED IN ITS KEEPING QUALITIES.

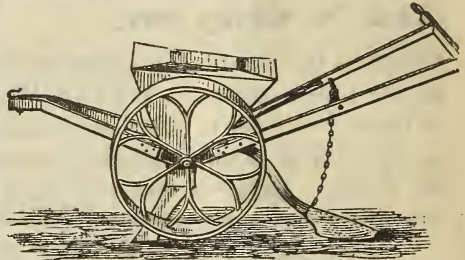
Send for "Dairyman" giving full particulars and testimonials.

VERMONT FARM MACHINE CO.,

Bellows Falls, Vt.

mar-41

HALLOCK'S New Corn Planter, BEAN AND PEA DRILL,



The above cut represents the **PLANTER** recently perfected by the subscriber. It opens the furrow, drops the grain in any quantity desired, and covers—in one operation. It deposits in hills 4 feet, 2 feet, 1 foot; 6 inches, or a continuous drill; which is done by using one or more of the cavities in the cylinder; cork the ones not used, or half-fill with a cork-slice to drop less quantity. Price \$12.00.

Brush and plate attachment the same as used in the small Drill extra. This consists of a round brush and 6 tin plates. To change, remove the dropping cylinder and small straight brushes by taking off the left hand wheel, and draw out the axle and put the round brush in its place; take one of the plates with hole suited to the size of the seed desired to be sown, to pass through the hole freely, place it in the grooves of the bottom of the hopper in front. The quantity sown is regulated by the plates. The farm or garden can be supplied with a machine suitable for planting all kinds of small seeds in drills, as well as corn, peas or beans, in hills or drills. Price, combined, \$15.00.

E. D. HALLOCK,
 No. 55 South Charles Street,
 BALTIMORE, MD.

Orders received at this office.

Feb-1f

**USE ONLY
ORCHILLA GUANO**

—FOR—

Wheat, Corn, Oats, Buckwheat & Grass,
Price \$24 Per Ton, Cash,
ON BOAT OR CARS AT BALTIMORE. SEND FOR CIRCULARS.

J. B. RUSSELL, Importer,
54 Buchanan's Wharf. Feb-ly Baltimore, Md.

ESTABLISHED 1843.

R. Q. TAYLOR,

G. E. S. LANSDOWEE

R. Q. TAYLOR & CO.,

Opposite Barnum's Hotel, Baltimore.

Hats, Furs, Umbrellas.

Fine Goods at Attractive Prices.

FLOWERS, PLANTS, BULBS, &c.

MY NEW ILLUSTRATED CATALOGUE, WITH COLORED PLATE FOR 1879, OF
RARE AND POPULAR PLANTS FOR THE

GARDEN, CONSERVATORY, &c.

Now ready. Mailed free to all customers; to others on receipt of four three-cent stamps.

ADDRESS,

ROBERT J. HALLIDAY,
Baltimore, Md

E. A. BAGLEY.

WHOLESALE AND RETAIL

NURSERY AND SEEDSMAN,

Jerusalem Mills, Harford Co., Md.

40000 Peach Trees, \$50 to \$70 per 1000, First Quality

ALSO, APPLE, PEAR, CHERRY, &c., EVERGREENS AND ORNAMENTAL TREES, VINES, HEDGE
PLANTS, &c. GARDEN SEED IN LARGE OR SMALL QUANTITIES.

Prices Early Cabbage, Tomato and Egg Plants ready for delivery early in the season at lowest:
E. A. BAGLEY, Jerusalem Mills, Md.

Send for Price List.

mar-3t

E. A. BAGLEY

TREES ROSES SHRUBS


The largest and most Complete Stock of Fruit and Ornamental Trees in the U. S. Priced Catalogues sent as follows: No. 1. Fruits, (new ed.) with plate, 15 cts.; plain, 10 cts. No. 2. Ornamental Trees, etc., (new ed.) with plate, 25 cts.; plain, 15 cts. No. 3. Greenhouse, Free. No. 4. Wholesale, Free, and No. 5. Catalogue of Roses, with beautiful plate of New and Rare Roses, 10 cts.; plain, Free. No. 7. Catalogue of Strawberries, with plate, Free. Address,
ELLWANGER & BARRY, Rochester, N.Y.

Feb-91

OLDEST Dental Establishment IN MARYLAND.

Drs. S. H. & E. A. GILL,
N. W. Cor. Lombard & Hanover Sts.
BALTIMORE, MD.

ESTABLISHED 1828

 Elegant Sets of Teeth from \$5.00 to \$15. Gold and Silver Fillings \$1.00 and upwards. Teeth extracted without pain. Nov-1y

CHOICE FLOWER and GARDEN SEEDS.

Strawberries, Peaches, &c.

NEW SORTS BY MAIL.

Plants of the newest and finest improved sorts, carefully packed and prepaid by mail. My collection of Strawberries took the first premium for the best collection, at the great show of the Mass. Horticultural Society, in Boston. I grow over 100 varieties, the most complete collection in the country, including all the new, large American and imported kinds. Priced descriptive Catalogues, gratis by mail. Also Bulbs, Fruit Trees, Roses, Evergreens. Choice Flower, Garden, Tree, Evergreen, Herb, or Fruit Seeds, 25 packets of either for \$1.00, by mail.

C.C. The True Cape Cod Cranberry, best sort for Upland, Lowland, or Garden, by mail, prepaid. \$1.00 per 100, \$5.00 per 1,000. Wholesale Catalogue to the Trade. Agents wanted.

B. M. WATSON, Old Colony Nurseries and Seed Warehouse, PLYMOUTH, MASS. Established 1842, Mar-1f

Asparagus—New Variety.

Smalley's Extry Early Defiance; 2 weeks earlier than Colossal, a larger, softer grass; far superior to all other varieties. One acre will produce more grass with the same treatment than 2 acres of Colossal. It is the best Asparagus grown, either for private use or for market. Two-year-old plants, \$5 per 100, \$30 per 1000; seed \$10 per lb. Address, A. SMALLEY, Bound Brook, Box 99, N. J. mar-2

John Saul's

CATALOGUE OF

New Rare & Beautiful Plants,

will be ready in February, with a colored plate.

It is full in really good and beautiful plants—New *Dracenas*: *Goldena*, *Princess Margaret Fredericia*, &c. New *Crotons*: *Hanburyames*, *Earl of Derby*, *Williamsii*, &c. A fine collection of East Indian and other orchids, &c. New French and English Roses. A set of beautiful new *Coleus*. New *Geraniums*, new *Pelargoniums*, new *Oleanders*, new *Tuberous Begonias*, new *Dipladenas*, new *Ixoras*, &c. New *Fuchsias*, *Dahlias*, *Chrysanthemums*, &c.

Roses.

An immense Stock of all the New and Standard varieties, grown in pots, or in roots—cheap.

Fruit and Ornamental Trees.

New Pears, New Peaches—with a large stock of Apple, Pear, Peach, Plum, Cherries, Standards and Dwarf, Grape Vines, Small Fruits, &c.

Ornamental Trees

in great variety for Parks, Lawns, Garden, &c.

Evergreens

of all sizes, all of the finest quality, and at the lowest rates.

Vegetable Seeds

of the finest quality, fresh and pure grown by myself, or specially for me, or my importation.

Flower Seeds.

Being extensively engaged in importing and growing.

New and Rare Plants.

consequently my facilities for seed saving are unequaled.

The following Catalogues with others now ready mailed free:

No 1. *A Descriptive Catalogue of Fruit Trees.*

No. 2. *A Catalogue of Garden, Agricultural, and Flower Seeds.*

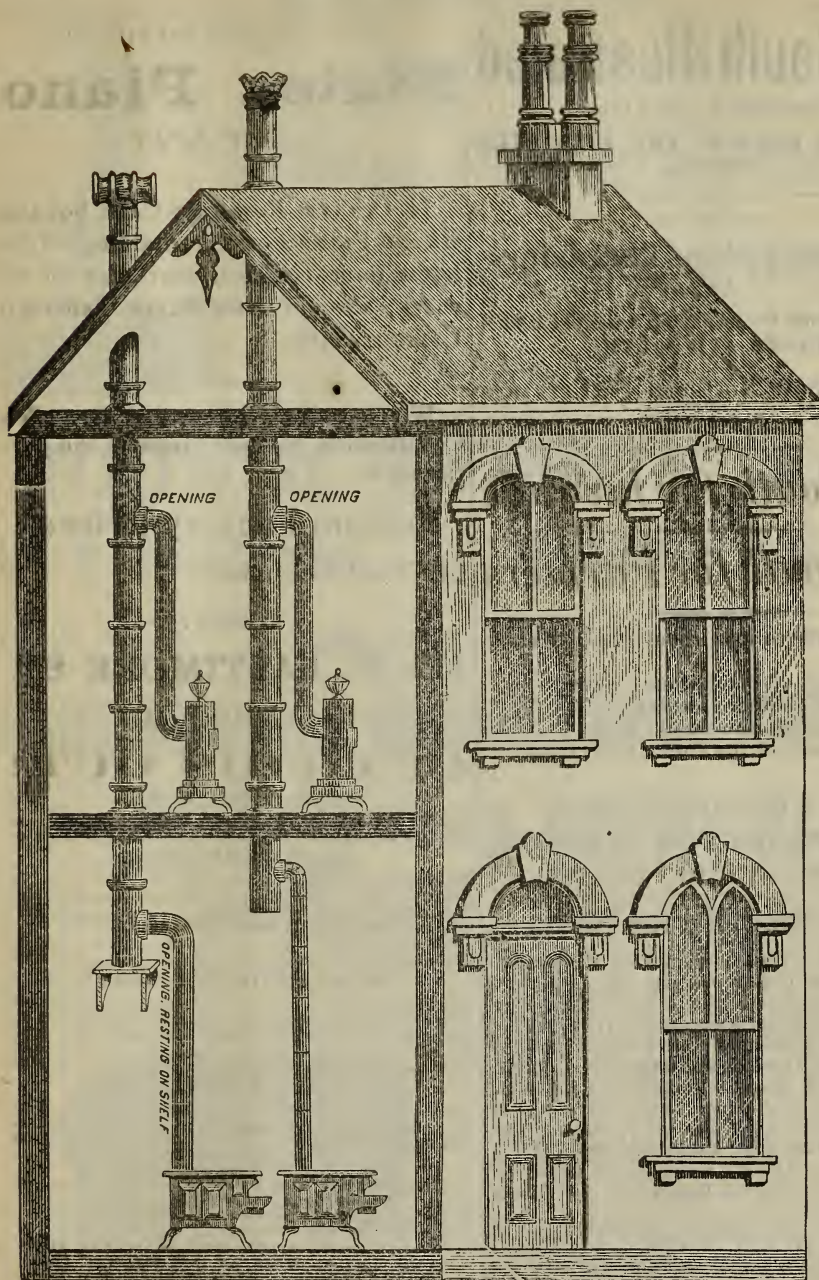
No. 5. *Descriptive Catalogue of a Selection of Roses.*

No. 6. *A Catalogue of New, Rare and Beautiful Plants, with a Colored Plate free to Customers—to others, 10 cts. A plain copy to all applicants free.*

JOHN SAUL,

Washington, D. C.

Feb-21



Save the Expense of Building a Brick Chimney.

Our Fire Clay Chimney Pipe does not Rust or Crumble or Crack by Heat. It has been used 9 years for Dwellings, Schools, Churches, &c. No Danger from Fire, as it does not communicate Heat to Wood. It is as solid as Brick and no Bricks or Bricklayer are required; any one can put it up. Each piece is 2 feet long and rests in the bowl of the next. Plain Pipe 40 cents per foot. A complete chimney to use in 2 stories can be furnished for about \$5.00. Send for descriptive circular with full information.

Showing form of construction, which can be varied to suit any design.

CHAS. H. TORSCH & CO.,

101 Hanover Street,

BALTIMORE.

The South Illustrated

Pronounced by the Press

THE BEST BOOK OF THE KIND EVER
ISSUED.

CONTAINING

116 Pages, 50 Fine Engravings

—AND—

LETTERS from WELLKNOWN GENTLEMEN
NORTH AND SOUTH,

Showing how Northern Settlers are
received.

The South for Invalids

The South for Farmers

Every Northern man should read it carefully.

Descriptions of Plantations for sale.
50 views of Southern scenery.

Every Southern man should have it.

Mailed, postpaid, for Four 3 cent Stamps.

Address—

GEO. H. CHAPIN, PUBLISHER,

257 WASHINGTON STREET,

Jan-1y BOSTON, MASS.

Special Offer of Fine Plants.

10 Roses or 10 Baskets Plants for \$1; 10 Bedding Plants or 6 Begonias for \$1; 12 Foliage Plants or 12 Chysanthemums, \$1; 8 Fuchias or 8 single or 8 double Geraniums, \$1; 18 Double Petunias or 10 Mixed Lantanas for \$1; 12 Named or 20 Seedling Verbenas and 2 Geraniums for \$1; 2 Heliotropes, 2 Rosec, 3 Verbenas and 3 Geraniums for \$1; 30 Distinct kinds and Colors of Foliage Plants for \$2. All Labeled, and only one of a kind, sent by Mail, Post Paid, on Receipt of Price. 6 \$1 Lots for \$5; Catalogues Free, E. D. Darlington, Doylestown, Bucks Co., Pa. Apr-2t

THE NEW HANDBOOK OR MANUAL ON FRUITS, BY R. H. HAINES, is just what is wanted in many a home. It fully explains the cultivation of BOTH, SMALL FRUITS and FRUITS TREES, and contains many pretty suggestions as to how the time may be passed pleasantly in the Gardens or orchards. It tells how to grow LARGE BERRIES, and to have full crops of Plums, &c., as well as giving some 200 or 300 other facts of interest to Fruit Growers. Send for a Copy while making your Gardens this Spring. Price 30 cents. Address, R. H. HAINES, Saugertis, on Hudson, N. Y.

Apr-tf

NEW YORK AND BALTIMORE

States Piano COMPANY.

7½ OCTAVE ROSEWOOD-CASE SQUARE
GRAND PIANO FORTE, containing all the
latest improvements, warranted for six
years; also our NEW SCALE TRICHORD
UPRIGHT, \$165.

We keep No AGENTS and GIVE No
COMMISSIONS, but sell direct to the pur-
chaser at

Bottom Factory Prices.

Send for Circulars.

BRANCH:

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CUT THIS OUT!

PEARL WHITE WARE.		cts.
Dinner Plates, a dozen.....	75	
12 handled cups and 12 saucers.....	1 00	

WHITE STONE CHINA.		
Tea Plates, a dozen.....	75	
Dinner Plates, a dozen.....	1 00	
12 handled cups and 12 saucers.....	1 25	
Covered Dishes, 65, 75 and 85 cents each.		
Tea Set, 44 pieces.....	3 00	
Chamber Set, 11 pieces.....	3 00	

PORCELAIN OPAQUE CHINA		
Tea Plates, a dozen.....	1 00	
Dinner Plates, a dozen.....	1 25	
12 handled cups and 12 saucers.....	1 50	
Tea Set, 44 pieces.....	4 50	
Chamber Set, 11 pieces.....	4 00	

WHITE CHINA.		
Dinner Plates, a dozen.....	2 75	
12 handled cups and 12 saucers.....	2 25	
Tea Set, 44 pieces.....	6 00	

GLASSWARE.		
Goblets, Fancy Crystal, a dozen.....	00	
Plain Crystal Goblets, a dozen.....	75	
Tumblers 50 cents a dozen and upwards.		
Crystal Dessert Set, 4 articles.....	50	

Our facilities are unsurpassed for securing direct from the manufacturers, all new styles of China, Earthen and Glassware, Bowls, Gellery dishes, Dishes, Goblets, &c., at lowest cash prices, and further quotations of prices will be promptly furnished on application.

Any of these articles will be forwarded, satisfaction guaranteed, either per Express C. O. D., or per regular freight on receipt of the cash.

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No. 41 N. HOWARD STREET,

BALTIMORE,

Oct-1y




ALL KINDS OF
Pumps, Pipe and Fittings,
LEATHER BELTING,

Rubber Hose, &c.

JOHN H. BUXTON, Agt.
46 E. PRATT ST., BALTIMORE, MD.

Mar-tf

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ECLIPSE WIND MILLS, NONPARIEL FARM AND FEED MILLS.

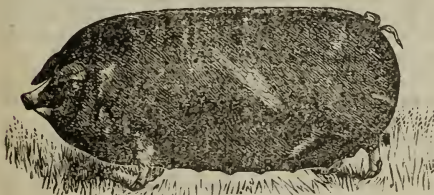
A. RIGGS,

SUFFIELD, CONN.,

Proprietor of Model Herd of

Poland China Swine

of the Black Beauty strain,



"IDLE GIRL," age 2 years; weight as here shown, 560 pounds.

Illustrated Circulars sent upon application to

B. C. PLATT,
Business Manager,
SUFFIELD, CONN.

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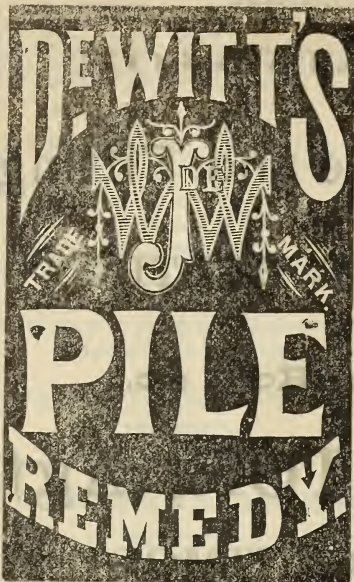
A GOOD PLAN.

Anybody can learn to make money rapidly operating in Stocks, by the "Two Unerring Rules for Success," in Messrs. Lawrence & Co.'s new circular. The combination method, which this firm has made so successful, enables people with large or small means to reap all the benefits of largest capital and best skill. Thousands of orders, in various sums, are pooled into one vast amount and co-operated as a mighty whole, thus securing to each shareholder all the advantages of the largest operator. Immense profits are divided monthly. Any amount, from \$5 to \$5,000, or more, can be used successfully. N. Y. Baptist Weekly, September 26th, 1878, says, "By the combination system, \$15 would make \$75, or 5 per cent.; \$50 pays \$350, or 7 per cent.; \$10 makes \$1,000, or 10 per cent. on the stock, during the month, according to the market." Frank Leslie's Illustrated Newspaper, June 29th: "This method of operating stocks is the most successful ever adopted." New York Independent, Sept. 12th: "The combination system is founded upon correct business principles and no person need be without an income while it is kept working by Messrs. Lawrence & Co." Brooklyn Journal, April 29th: "Our editor made a net profit of \$101.25 from \$20 in one of Messrs. Lawrence & Co.'s combinations." New circular (mailed free) explains everything. Stocks and bonds wanted Government bonds supplied. Lawrence & Co., Bankers, 17 Exchange Place, N. Y. Je-1f

The Farmer's Friend and Guide

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Cannot be excelled for the Cure of Blind Bleeding,



Ulcerating, Protruding and Itching Piles.

We guarantee it in every case, matters not of how long standing or how deeply rooted, it gives instant relief, and cures the most chronic cases, in from one to three weeks, if used as directed. Unlimited number of testimonials can be given if desired, but all we ask is a trial, to convince that it will cure when all other means have failed.

Sold by all dealers in medicines. 50 cents per bottle. Sent free on receipt of price, by

JACOB WALTZ, General Agent for U. S.,
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All genuine have Trade Mark and signature of J. W. De Witt on wrapper. June-1y

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The Best

Queens and Colonies

IN THE U. S.



As I make Queen rearing a specialty, I guarantee to those ordering from me exactly what they bargain for. Circulars free. Address,

D. A. PIKE, Box 19, Smithsburg,
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E. MILLS, Jr.

23 LIGHT ST.

TIN ROOFING AND SPOUTING.

Country orders promptly attended to.
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KENDALL'S SPAVIN CURE



Is sure to cure Spavins, Splints, Curb &c. It removes all unnatural enlargements. DOES NOT BLISTER. Has no equal for any lameness on beast or man. It has cured hip-joint lameness in a person who had suffered 15 years. Also cured Rheumatism, Corns, frost-bites or any bruises, cuts or lameness. It has no equal for any blemishes on horses: Send for illustrated circular giving POSITIVE PROOF. Price 1. ALL DRUGGISTS have it or can get it for you. DR. J. KENDALL & Co., Proprietors, Enosburgh Falls, Vermont. THOMSEN & MUTH, Agents, 18 German Street, Baltimore, Md. Dec-1f



Mount Holly Poultry Yard.

HIGHEST-CLASS

PLYMOUTH ROCKS,
LIGHT BRAHMS,
BROWN LEGHORNS.

Our birds are standard weight and noted for distinct marking. We keep nothing but the best.

Eggs \$2 for 13, \$5 for 40. Chicks for sale after Sept. 1. Send for circular. P. O. Box 684. GARLAND & SMITH, Baltimore, Md. mar 3t



for catalogue to

We manufacture the old reliable Stover—the well tried, strong, durable and self-regulating, solid Wind Mill, which took the Centennial Diploma, as well as a Medal. Also O. E. Winger's Improved \$20 Feed Grinder, which is operated by Pumping Wind Mills—a novel and perfect Mill for grinding all kinds of grain for stock and house use. Agents wanted. Send

E. B. WINGER, Successor to
STOVER WIND ENGINE CO., Freeport, Ill
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BELMONT STOCK AND STUD FARM.

Thoroughbred stallion Florist, by imported Australian; two Black Hawk trotting and riding stallions; two imported Percherons and four of their get, out of imported mares, two year old Percheron colt; one of same age, the last colt of my Black Hawk, and when 27 years old, and he by Hill's Black Hawk in 1833; a Clydesdale and superb stallion, and will sell or farm any of them to live men on fair terms. The same of Short Horn Cattle, purely bred of all ages, and Berkshire and Chester White Hogs. Early applications are best. Send for Catalogues. S. W. FICKLIN, Near Charlottesville, Va. Mar-2t

THE

"Snyder Blackberry,"

Perfectly Hardy; Enormously Productive; Finest Flavored Blackberry. \$1.00 per dozen plants by mail; \$5.00 per 100. Address—

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PERUVIAN GUANO.



The undersigned, agent for the sale of **PERUVIAN GUANO**, imported into the United States by Messrs. W. B. Grace & Co., New York, agents for the consignees of the Peruvian Government, having just received per ships "Cashmere," "St. Lucie" and "Mystie Belle," a full supply direct from the best Guano deposits, **Containing 10 per Cent. of Ammonia**, offers it for sale, delivered from the Government Storehouses, Water's Wharf.

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THE Canton Monitor Engine.

Something Interesting to FARMERS!

MOWING MACHINE TRIAL.

AT THE

Experimental Farm, Chester County, Pa.

May 30th, 1878.

REPORT OF THE COMMITTEE:

Wheeler, No. 5, Draft 290 lbs., works well.

Walter A. Wood, Draft 290 lbs., works well.

New Champion, Draft 285 lbs., works probably a little inferior in height of cutting.

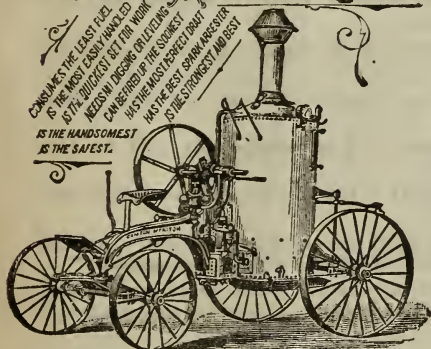
Buckeye, [C. Aultman & Co] Draft 200 lbs., work better executed than any other.

MILTON CONRAD, ELI THOMPSON,
BENJAMIN SWAIN, THOS. HOOPES.

C. A. AULTMAN & CO.

12 S. Eutaw Street,

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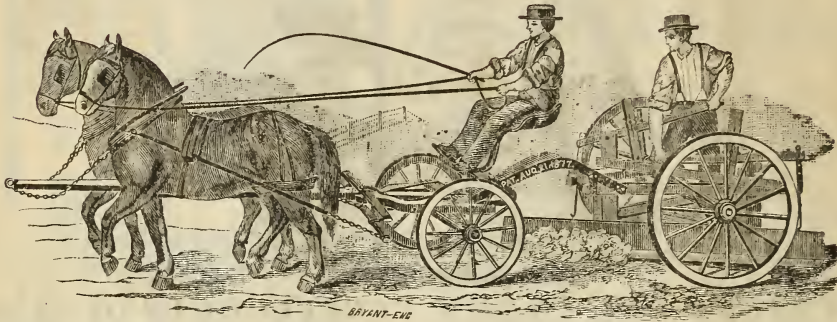
MADE BY **C. AULTMAN & CO.**
CANTON OHIO.



C. AULTMAN & Co.
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Ap-3t,

PENNOCK'S PATENT ROAD MACHINE.



WHAT OWNERS OF MACHINES SAY:

"I can make one mile of road per day at an average cost of \$10. Would pay \$1,000 rather than be without it"

Mercer, Pa., Aug. 20th, 1879.

W. R. PACKARD.

From *Local News*, West Chester, Pa., June 17th, 1879: "We are satisfied that *fifty men* could not have done in *one day* what this machine accomplished in *two hours*."

From Lewis G. Mayers, Chairman Street Committee, Gloucester, N. Y.: "It will do *more* and *better* work in a day than fifty men."

I. P. Roberts, Prof. of Agriculture, Cornell University, Ithaca, N. J., says: "Its introduction will secure first class roads at much less expense."

The Street Committee of Gaddes, N. Y., says: "I performed more work in one hour with it than twelve men could by the old plan in ten hours."

Mr. C. Field, Supt. of Streets, Syracuse, N. Y., in 1879, says: "Your machine fully paid its cost by a few days' work."

Hon. D. M. Osborn, Mayor of Auburn, N. Y., says: "Every city should have one or more of your machines."

Marcus E. Cook, of Wallingford, Conn., tells: "I cannot speak too highly in its praise. It takes all the yankees by surprise. They say: 'It is ahead of anything we have seen in road-making,'"

John M. Ball, President of Boone Co., Ind., Agricultural Society, says: "This machine was used in grading the race course of our county fair-grounds, and a more accurate and better time track was never made in the West."

We warrant this Machine to keep the Roads *twice* as good for *half* the present cost

MACHINES SENT ON TRIAL.

Write for particulars.

S. PENNOCK & SONS,

Apr-3t

Kennett Square, Pa.

CHESAPEAKE CHEMICAL WORKS.

OIL VITRIOL

MANUFACTURERS AND MANIPULATORS OF PHOSPHATES ON
ORDERS AND FORMULAS FURNISHED BY;
OUR FRIENDS.

To those who want to manipulate their own Phosphates, we offer a full line of PURE MATERIALS.

Having completed extensive improvements and additions to our Works, giving us increased facilities, we are now prepared to execute orders with greater promptness, and deliver goods in much better mechanical condition than heretofore.

We offer to the Trade the following Goods, all of which are absolutely Free from Adulteration.

DISSOLVED GROUND BONE,

Containing 3 per cent. of Ammonia.

Dissolved South American Bone Ash.

DISSOLVED SOUTH CAROLINA PHOSPHATE.

SLINGLUFF'S No. 1 Ammoniaed Super-Phosphate,

SLINGLUFF'S Naive Super-Phosphate.

This article we confidently recommend as one of the very highest grade on the market.

SLINGLUFF & CO.

OFFICE,

155 W. FAYETTE ST.

WORKS,

FOOT OF LEADENHALL ST.

BALTIMORE.

THE GRANITE ROOFING COMPANY of BALTIMORE

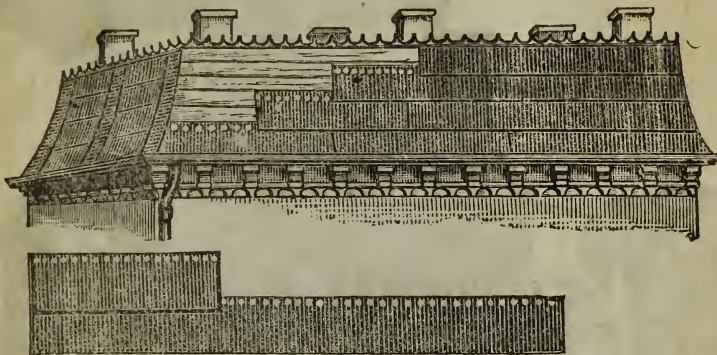
Office, and Factory, 14 S. Front St.

P. H. MORGAN, President and Sole Agent for the United States.

STATE AND TERRITORIAL RIGHTS FOR SALE.

FAVORABLE TERMS TO AGENTS, &c.

Received Highest Premium at Maryland Institute Fair, held in October last for Roofing
Material Cement, and Diploma for Tank.



No other Roofing enjoys the reputation universally accorded our Granite Roofing. It is as fire-proof as slate or sheet iron. It resists the action of water and of the strongest acids. It is good for the lining of Cisterns or Water Tanks, will not color or give any distaste to Drinking Water. It is more durable than any other kind of Roofing. It resists and arrests dampness. It can be walked on without injuring it. It is adapted for steep as well as for flat roofs. It can be easily and rapidly laid on by inexperienced persons. All these qualities render it unequalled for Rolling Mills, Steamboat Decks, Barges, Manufacturing Establishments, Railroad Depots, and for every description of buildings, particularly such as are liable to take Fire, &c.

The Granite Roofing Company also manufactures Roofing Paint for Metallic or Shingles Roofs, Damp Walls and Iron Work generally. It keeps constantly on hand all kinds of Felt and Cements.

The Granite Roofing is manufactured by machinery, ready to lay on the building. It is rolled in sheets 15½ feet long by 32 inches wide and ¼ inch thick. It is put up on rollers and securely packed for shipping to any distance.

The Granite Roofing Company will make special terms with agents or parties in the roofing business.

Repairing old roofs of every description promptly attended to and charge moderate. Country Orders Solicited.

Norwithstanding the superior quality and durability of our Roofing, it is supplied on more favorable terms than Tin or Shingles Roofs. The very best references given.

I wish to call attention to a recent invention of mine, viz.: A Tank of any capacity for containing strongest acids. Cost reasonable and satisfaction guaranteed.

Morgan's Acid Tank.

Mr. Morgan has also Patented an Acid Tank, a model of which he has on exhibition, which will contain for any length of time the strongest acids without leaking. They can be made of wood, quick or iron, of any size or capacity, and are merely lined with this roofing material, and are guaranteed to contain the strongest acids known, and at the same time the cost is more reasonable than any other tank made for the same purpose. Mr. Morgan has the strongest endorsement for Dr. Lieby, of the Patapasco Guano Company's Works, as well as from other prominent men. The following certificates speak for itself:

Acid Tanks (warranted acid proof) and Water Cisterns of any capacity, cheaply and promptly constructed, either in City or Country. Also Steam Boilers and Pipes covered at shortest notice.

BALTIMORE, October 3d, 1878.

This is to certify that I had this little Tank made by Mr. P. H. Morgan, filled with strong Muriatic Acid for six days, and that there were no signs of leakage.

As manufacturers, handling large quantities of Muriatic Acid, frequently experiencing difficulties, in providing tanks, which will not be affected by Muriatic Acid, I consider this invention of great value. I will add, that there has been built at the Baltimore Chrome Works, a large tank, holding over 8,000 gallons, which has been used for storage of Muriatic Acid for the last four months, and has given entire satisfaction.

Respectfully,

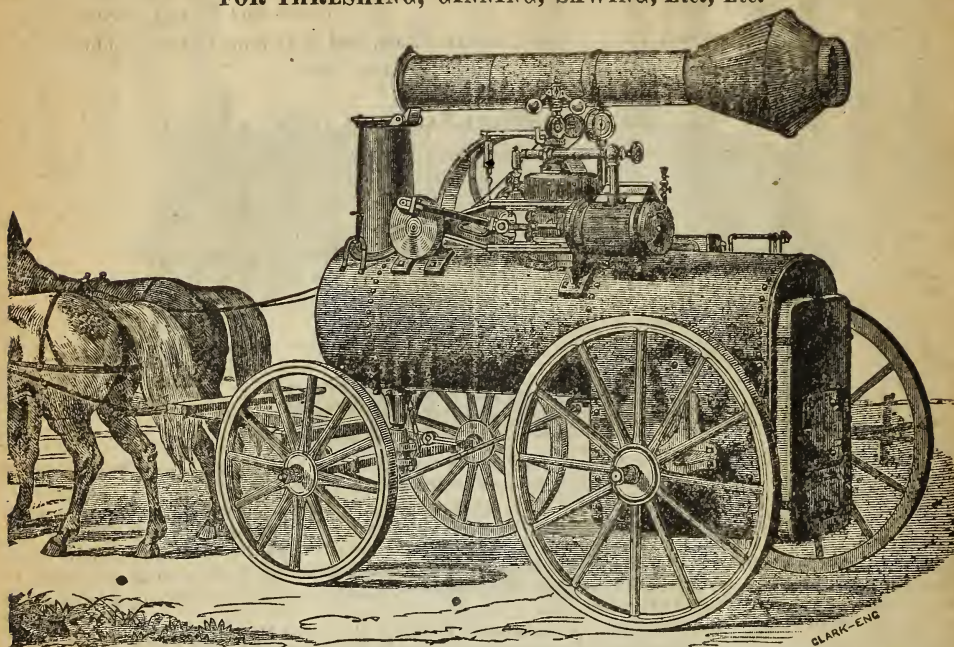
W. SIMON, PH. D.

PENNSYLVANIA AGRICULTURAL WORKS,

A. B. FARQUHAR, Proprietor, YORK, PA.

STEAM ENGINES A SPECIALTY

FOR THRESHING, GINNING, SAWING, Etc., Etc.



Above cut represents my Vertical Engine, mounted. In use it stands on the base, and it is let up and down with perfect ease. Is adapted for Threshing, Ginning, &c., and while it is in every respect a first-class article, it is the cheapest portable engine made. I make them with and without wheels, and of all sizes; six horses being the leading size.

HORIZONTAL BARS

From four to twenty horse power, adapted to all descriptions of work where power is required, and warranted equal to any made in America. The boilers are made of the best charcoal iron, and I have never had one to give way. *Send for Illustrated Catalogue.*

Sept-1y ADDRESS **A. B. FARQUHAR, York, Pa.**

OF MERIT
AT
CENTENNIAL
Send for Catalogue.



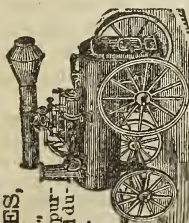
Received Medal
AND
HIGHEST AWARD

STEAM ENGINES,

A. B. FARQUHAR, York, Pa.,

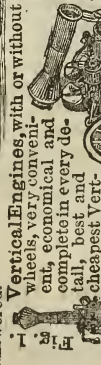
Cheapest and best for all purposes—simple, strong, and durable. Also Horse Power and Gin Gear.

SAW, GRIST AND COB MILLS, GINS, PRESSES AND MACHINERY generally. Inquiries promptly answered.



Vertical Engines, with or without wheels, very convenient, economical and complete in every detail, best and cheapest Vertical in the world. Fig. 1 is engine in use, Fig. 2 ready for road.

Boiler & cylinder larger than other makers.



Send for Catalogue.

The Farquhar Separator

(Warranted)

Agricultural

Yorks, Pa.

Lightest draft, most durable, economical and perfect in use. Wastes no seed for market.

Fig. 2.

Steam Engines, Horse Power and Threshers of all kinds also, Pumps, Cultivators, &c., &c.

Send for Illustrated Catalogue. Address A. B. Farquhar, York, Pa.



THE
SILVER MEDAL
AT
PARIS EXPOSITION.

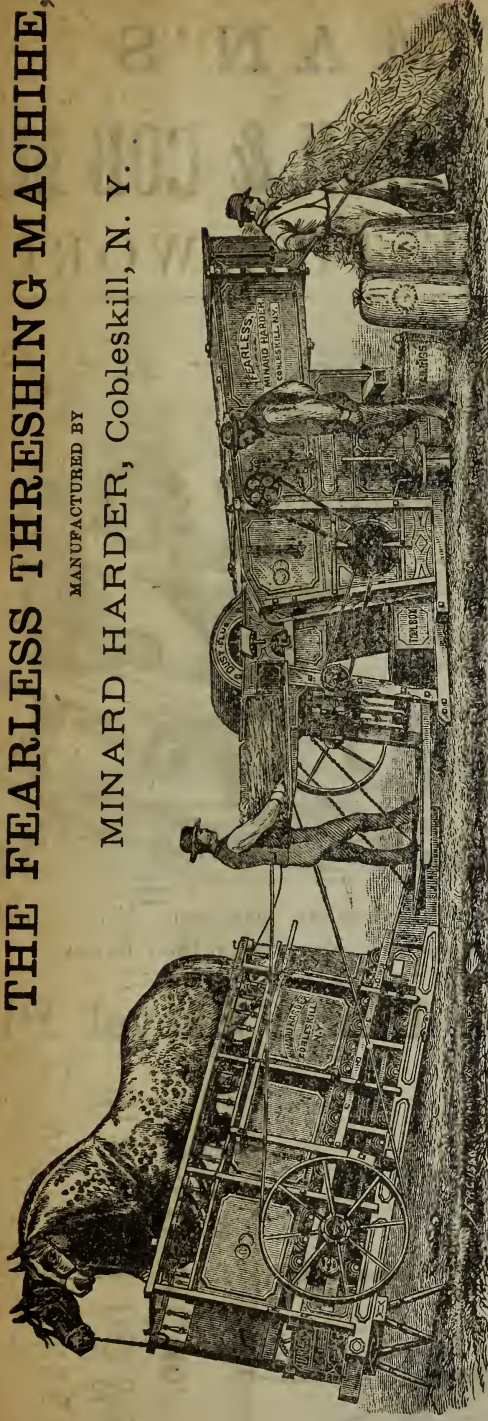


HIGHEST PRIZE
AWARDED
SEPARATORS.

THE FEARLESS THRESHING MACHINE,

MANUFACTURED BY

MINARD HARDER, Cobleskill, N. Y.



Stands unequalled for ease of team. The horse power runs, as shown by the records, with more than one-third less friction than any other. The only machine awarded a medal on both Horse-Power and Thrasher and Cleaner at the Centennial Exhibition, as shown by Official Report, which says: "For special features in the power to secure light running and minimum friction; for the ingenious form of the Straw Shakers, which insure the proper agitation to separate the grain from the straw."

The Two Grand Gold Medals were also Awarded the HARDER MACHINE, at the Grand National Trial, Auburn, N. Y.

For "slow and easy movement of horses, 15 rods less than 1 1/4 miles per hour; Mechanical Construction of the best kind; thorough and conscientious workmanship and materials in every place; nothing slighted; excellent work, &c.," as shown by official Report of Judges. Thrashers, Separators, Fanning-Mills, Wood Saws, all of the best in Market.

W. C. Lauder, of Oregon, Rockingham Co., N. C., writes December 15, 1879, about the Fearless Two-horse Machine, as follows: "Have only Lever-power (8 horse) machine to compete with. Have compared books and find we threshed more in a week than any of them. Have threshed 50 bushels of wheat per hour, 145 bushels damp oats in 115 minutes, the first 95 bushels without stopping. The first four days out this season I threshed 1000 of wheat and set the machine 17 times. Have threshed 17,000 bushels grain, sawed 500 cords wood, this fall, and now have it running the machinery in a tobacco factory."

And, I. B. Skipper, of McClellanville, Charleston Co., S. C., writes March 1, 1879, also about our Two-horse Machine, as follows: "The machine gives full satisfaction. It threshes 100 bushels per hour, and that is as fast as I want to thresh. I think it can beat any thrasher in the known world. It was all right and never got out of order one minute from the day we started until we finished. Some of our threshing was rice."

One-horse, Two-horse and Three-horse Machine, mounted or unmounted, as may be devised. For Catalogue, with Prices, full Information, and Judges Reports.

Address,

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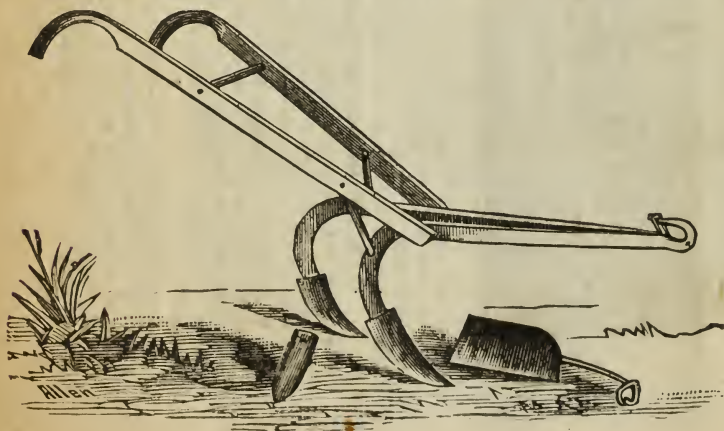
MINARD HARDER, Cobleskill, N. Y.

WHITMAN'S YOUNG AMERICA CORN & COB MILL, CHAMPION OF THE WORLD!



Farmers, Stock Raisers, Dairymen and Poultry Breeders can save more Money with one of these Mills than with any Implement or Machine on their Farm.

Whitman's Iron Beam Double Shovel Plow.



THE BEST IN THE WORLD.
Headquarters for Shovels, Bull Tongues,
Clod Fenders, Goulters, &c.
MANUFACTURED BY
E. WHITMAN, SONS & CO.
141 and 143 W. Pratt Street
BALTIMORE, MD.

The First. The Last. The Best.

The World Renowned



SEWING MACHINES.

THE LATEST TRIUMPH IS

THE NEW "B" IMPROVED

WHICH IS

LIGHT, SWIFT,
SIMPLE, SILENT,
DURABLE, RELIABLE,
STRONG, CHEAP.

A SPECIAL DISCOUNT TO CLERGYMEN.

\$15

A Good REFITTED MACHINE for \$15.

Often Sold for NEW by some dealers.

\$15

SEND FOR CIRCULARS TO

THE HOWE MACHINE COMPANY,

No. 42 N. CHARLES STREET,

BALTIMORE, MD.



Patented May 21st, 1876.

Powell's Prepared Chemicals,

Also, Pure Dissolved Bone, No. 1, Pure Ground Raw Bone, Bone Ash, Super Phos. Lime, Sulphate Soda, Sulphate Ammonia, Kainit, Muriate Potash, Fertilizing Bags, Dried Blood, Plaster, Sulphate magnesia, Oil of Vitriol, Nitrates Potash, Nitrate Soda, Commercial Salt, petre. Agricultural Salt, Sulphate Potash.

Wm. H. Brown, Pres't. W. S. Powell, Treas. W. L. Layfield, Sec'y

THE BROWN CHEMICAL CO.
 OF BALTIMORE.

SOLE MANUFACTURERS OF

POWELL'S PREPARED CHEMICALS,

AND DEALERS IN ALL KINDS

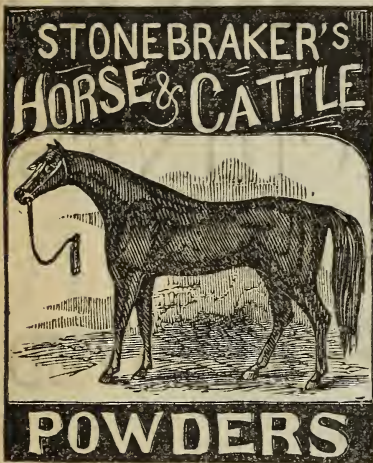
Fertilizing Materials,

Special Formulas made to order. Write for prices
 circulars, crop formulas, &c.

Office, 25 South Sharp Street,

P. O. Box 396.

BALTIMORE, MD



A CERTAIN EMEDY FOR

HEAVES, COUGHS, COLDS,

**Distemper, Hidebound, Worms, &c.,
 in Horses, Loss of Cud, Black
 Tongue, &c., in Cattle.**

For fattening, this Powder will be found very beneficial
 as they loosen the Hide, give an appetite, by which they
 will improve at least 25 per cent. faster.

Invaluable as a Preventive of Hog Cholera.

PREPARED AND SOLD BY

H. STONEBRAKER & SONS,**410 W. Baltimore St., Baltimore, Md.**

Stonebraker's Chicken Powders is a positive preventive
 and cure of Chicken Cholera, Price, 25 Cents.

1855 **BAUGH & SONS,** 1880
PHILADELPHIA, PA. AND BALTIMORE, MD.

MANUFACTURERS AND IMPORTERS OF

Pure Dissolved Animal Bones, Ground Raw Bones, Acid Phosphate,
 Bone Meal, High Grade Chemicals,

And other Supplies for the Manufacture of

HOME MADE FERTILIZERS.

Lowest Cash Prices for Goods of Guaranteed Standard.

Sulphate of Ammonia (full Strength, 25 Per Cent,) a Specialty.

We will fill orders for Chemicals to make Home-Made Fertilizers by any formula our customers
 desire to follow, and we will take pleasure in furnishing estimates of cost on application.

BAUGH & SONS.

No. 20 South Delaware Ave.,
 PHILADELPHIA.

No. 103 South Street,
 BALTIMORE.

Send for Prices and all desired Information.

FOUR POINTED STEEL BARB WIRE.

THE BEST AND THE CHEAPEST.

MERITS OF BARB FENCE.

It is the cheapest fence made; the most durable; is not affected by fire, wind or flood; does not cause snow-drifts; takes fewer fence posts; stock cannot push it down; it protects itself—acts on the defensive; it takes but little room; you can cultivate close to it; weeds are easily kept out of it; requires but little labor to put it up; you can draw at one load enough to fence a farm; and can fence a good sized farm in a day; it is the greatest practical invention of the age, and has come to be the farm and railroad fence of the country.

Sheep culture presents a striking example of the inefficiency of the fencing now in use. No branch of farming is more profitable if sheep could be protected. But no fence heretofore tried, except this, will keep sheep in, and dogs and wolves out.

It is easily seen, thus overcoming one of the main objects to plain fence wire. Its length is not effected by heat or cold. The wire is put up on spools in lengths of about one hundred rods, weighing 100 to 110 lbs., so as to be easily handled. One round measures 15 feet in length; 352 lbs measures a mile. Send for Circulars and Special Prices.

E. WHITMAN, SONS & CO., 141 & 143 W. Pratt Street, Baltimore, Md.

THE PENNSYLVANIA LAWN MOWER

FOR 1880.

Surpassing all Others

AND PRONOUNCED

"THE BEST."



The PENNSYLVANIA LAWN MOWER stands to-day at the head of the list of Lawn Mowers in the United States.

PRICE LIST FOR 1880.

Width of Cover.	Style.	Power Required.	Weight.	Price
10 inch.	8 in. wheels.	a child.	30½ lbs.	\$14
12 "	" "	a lad.	31½ "	18
14 "	" "	a lady.	36 "	20
16 "	" "	one man size.	38 "	22
18 "	" "	" " "	41 "	24

NEW MACHINES

FOR CUTTING HIGH GRASS.

15 in.	10½ in. wheels,	6½ in. cylinder, man size,	48 lbs.	\$23
17 in.	10½ in. wheels,	6½ in. cylinder, man size,	51 lbs.	25

The manufacturers have the most flattering testimonials from those who have used the *Pennsylvania Lawn Mower* and can fully guarantee its working more easily than any other mower in use. It will cut longer grass and run longer without oil; it is substantially made, and, altogether, the popular mower.



Whitman's METAL LINED CUCUMBER WOOD PUMPS.

Most Perfect Pump ever Invented.

The Weak Point in other Cucumber Pumps is in this rendered *indestructible*.

SUITABLE FOR WELLS OF ANY DEPTH.

Complete for 20ft. Well, \$7 to \$10.

The simplest arrangement for drawing water in the world.

They are easily kept in repair.

They can be put down in five minutes

They will not freeze.

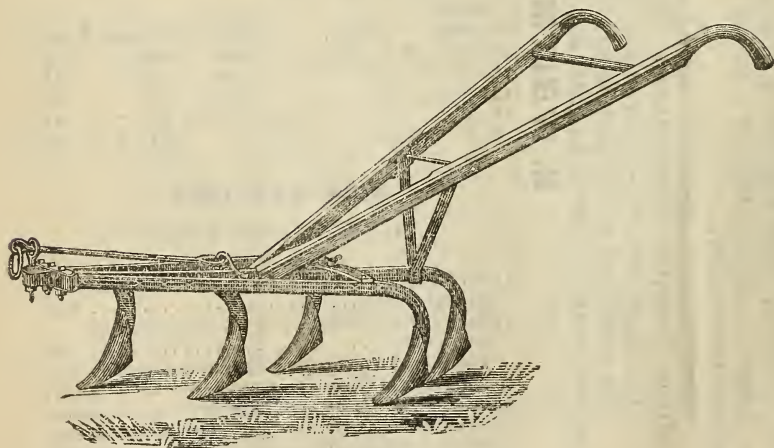
They will last for years without repair.

E. WHITMAN, SONS & CO.

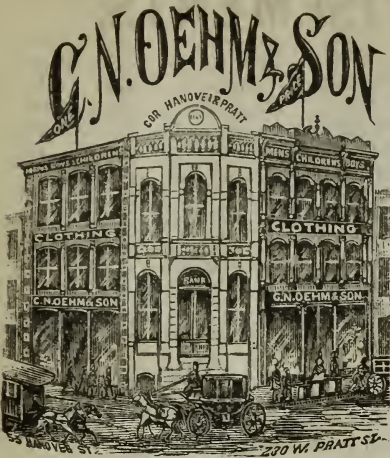
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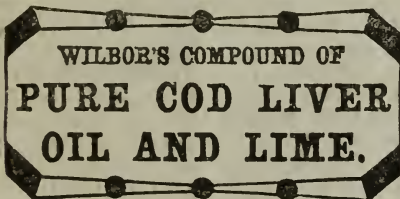
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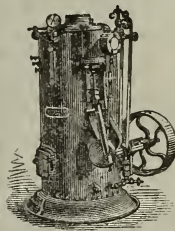
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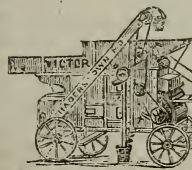
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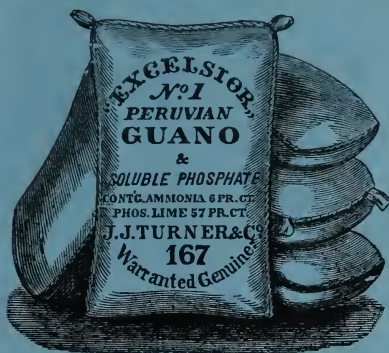
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